WUAA/HEBC
Falling & Bucking Endorsement

Western Utility Arborists Association
HortEducationBC

WUAA | Western Utility Arborist's Association

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Growing careers

Table of Contents

Introduction

Certified Utility Arborist (CUA) and Arborist Technician (AT) are British Columbia recognized trades whose training is funded and sanctioned through the provincial apprenticeship program. A 'Utility Arborist' is a person who undertakes any work required to prune or clear vegetation in proximity to energized equipment, structures and conductors. An 'Arborist Technician' is a person who undertakes to prune and perform other work on trees from the ground.

On May 1st, 2008 WorkSafeBC (WSBC) changed Part 26 of the Occupational Health and Safety Standard (OH&S) from "Forestry Operations" to "Forestry Operations and Similar Activities." Because of the similarity of utility line clearing and tree care operations to forestry operations, Certified Utility Arborists and Arborist Technicians now fall under the restrictions of Part 26 of the BC's OH&S regulation. This is in addition to the traditional safety requirements of CUAs and ATs, which includes (but isn't limited to) sections of Part 19 – Electrical Safety.

As a result, two important additions to the CUA/AT trades are in the process of implementation. First, our apprenticeship training programs have been modified and updated so that they meet the requirements of the BC Faller Training Standard (BCFTS). As of January 2012, all new apprentices will be trained and evaluated to BCFTS as a part of their apprenticeship training.

Secondly, existing CUAs and ATs will have the opportunity to be assessed on their falling skills using a WUAA modified form of the BC Faller Training Standard. It is important to note if an existing CUA or AT chooses not to qualify for the WUAA/HEBC Falling and Bucking Endorsement; they will no longer be certified to fall a whole tree from the base that is larger than 15 cm in diameter at a height of 30 cm from the ground.

HortEducationBC will be administering the WUAA/HEBC Falling and Bucking Endorsement.

This booklet is directly written for the assessment process. Its purpose is to aid in the objectives and process for qualifying Certified Utility Arborists and Arborist Technicians for the WUAA/HEBC Falling and Bucking endorsement.

Who is the Western Utility Arborists Association?

The WUAA is a not for profit organization incorporated under BC's Society Act. Our member companies represent and employ the majority of the province's CUAs. The WUAA is supported by the major utilities in British Columbia.

Due to the inherent hazards associated with the removal of trees in close proximity to high voltage electrical conductors, the WUAA was formed in the 1970s to promote safety and professionalism. Employers, working in conjunction with utilities such as BC Hydro and others, decided to formalize the training and started to certify employees. This credential represented formal classroom training, documented field experience and the successful completion of both written and practical exams.

This certification soon became the standard for all utility line clearing work in British Columbia. In 1989, the WUAA turned the responsibility for the certification of Utility Arborists over to the Ministry of Advanced Education, Training and Technologies. CUA became an apprenticed trade.

Currently, BC's Industry Training Authority (ITA) is the government agency responsible for training and the certification of Utility Arborists and Arborist Technicians.

It is important to note that the while the Industry Training Authority (ITA) is responsible for the apprenticeship training, it is not responsible for the WUAA/HEBC Falling and Bucking Endorsement for existing CUAs and ATs. The Western Utility Arborist Association, in conjunction with WorkSafeBC and HEBC, has developed the Falling and Bucking Endorsement for CUAs and ATs.

Who is HortEducationBC?

HortEducationBC (HEBC) is the voice for the ornamental horticulture and agriculture-based trades in British Columbia.

Ornamental horticulture and agriculture industry based activities all depend on a skilled workforce. At HortEducationBC we recruit new apprentices to horticulture & agriculture, sponsor apprentices to give them a head start, guide apprentices through their apprenticeship journey, manage employer-sponsor concerns, assist with access to tax credits and grants, and help experienced individuals achieve qualification.

Definitions

Arborist Technician (AT) - is a person who undertakes to prune and perform other work on trees from the ground. In their work, Arborist Technicians identify plants, select rigging gear, and have knowledge of how to fall, limb, and buck trees, assist climbers, ship brush, cut wood and clean up sites after tree care operations.

BC Faller Training Standard (BCFTS) - The BC Faller Training Standard was developed and implemented in 2003 to ensure all fallers in BC, regardless of where they work, receive high-quality training, supervision and be evaluated to the same requirements. The mandate of the program is to ensure that anyone working as a faller has the knowledge, skills, abilities, work practices and attitude necessary to work safely and productively. BC is the first province to require fallers to be fully certified to work in the sector.

Certified Utility Arborist or Utility Arborist (CUA)- is a recognized BC trade and defined as a person who undertakes any work required to prune or clear vegetation in proximity to energized electrical equipment, structures and conductors or who in the course of utility line clearing operations, prunes, falls or removes trees which could come into contact with energized power lines.

CUA Assessor – is an individual who has been qualified and trained according to the standards of the Western Utility Arborists Association and is approved to evaluate CUAs for the WUAA Falling and Bucking Endorsement.

Industry Training Authority (ITA) - is the BC provincial crown agency, established in 2004 and responsible for managing BC's industry training system and apprentices. CUA apprentices are trained through the ITA. It is important to note that the while the Industry Training Authority (ITA) is responsible for the apprenticeship training, it is not responsible for the WUAA Falling and Bucking Endorsement for existing CUAs and ATs.

Qualified Supervisor/Trainer (QS/T) - is fully responsible and accountable for all of the requirements under the WC Act and OH&S Regulation and must meet the requirements of Qualified Supervisor/Certified Falling Supervisor (Bullbucker). A QS/T will be issued a wallet card and certificate from the BC Forest Safety Council. QS/Ts may be authorized to certify new fallers, instruct new faller training, perform quality control duties, perform SAFE Companies signoff and other specialized duties if endorsed by the Council.

WUAA/HEBC Falling and Bucking Endorsement – The WUAA/HEBC Falling and Bucking Endorsement is a form of the BCFTS that has been modified to be appropriate for CUAs and ATs working in utility line clearing operations. Successful completion of the endorsement certifies a CUA or ATs to fall a tree that is larger than 15 cm in diameter at a height of 30 cm from the base. Failure to complete the endorsement process will mean that existing CUAs and ATs will be excluded from some falling activities in their day-to-day work.

WorkSafeBC (WSBC) - Formerly known as the Workers' Compensation Board, WorkSafeBC promotes workplace health and safety for the workers and employers in British Columbia.

Facility Requirements

Outdoor Work Area

The outdoor work area is a natural forest parcel adequate for tree removal activities.

The outdoor work area should ideally be a forested land parcel containing examples of coniferous and deciduous tree species. In order to meet assessment objectives, permission must be obtained from the landowner - to remove a minimum of ten - 75 to 100 foot trees per assessment.

The working area must be equipped with suitable hand tools and power tools.

Study Resources

WorkSafeBC BC Faller Training Standard Part 1
https://www.worksafebc.com/en/resources/health-safety/books-guides/bc-faller-training-standard/part-1?lang=en

WorkSafeBC BC Faller Training Standard Part 2
https://www.worksafebc.com/en/resources/health-safety/books-guides/bc-faller-training-standard/part-2?lang=en

WCB Occupational Health and Safety Regulation: Part 26 Forestry operations and similar activities
http://www2.worksafebc.com/Publications/OHSRegulation/GuidelinePart26.asp

Faller Training Standard Faller Video Series (17 Parts)
https://www.worksafebc.com/en/resources/health-safety/videos/bc-faller-training-standard-video-series/introduction-1-of-17?lang=en

Required Hand Tools, Tools and Equipment for F&B Assessment

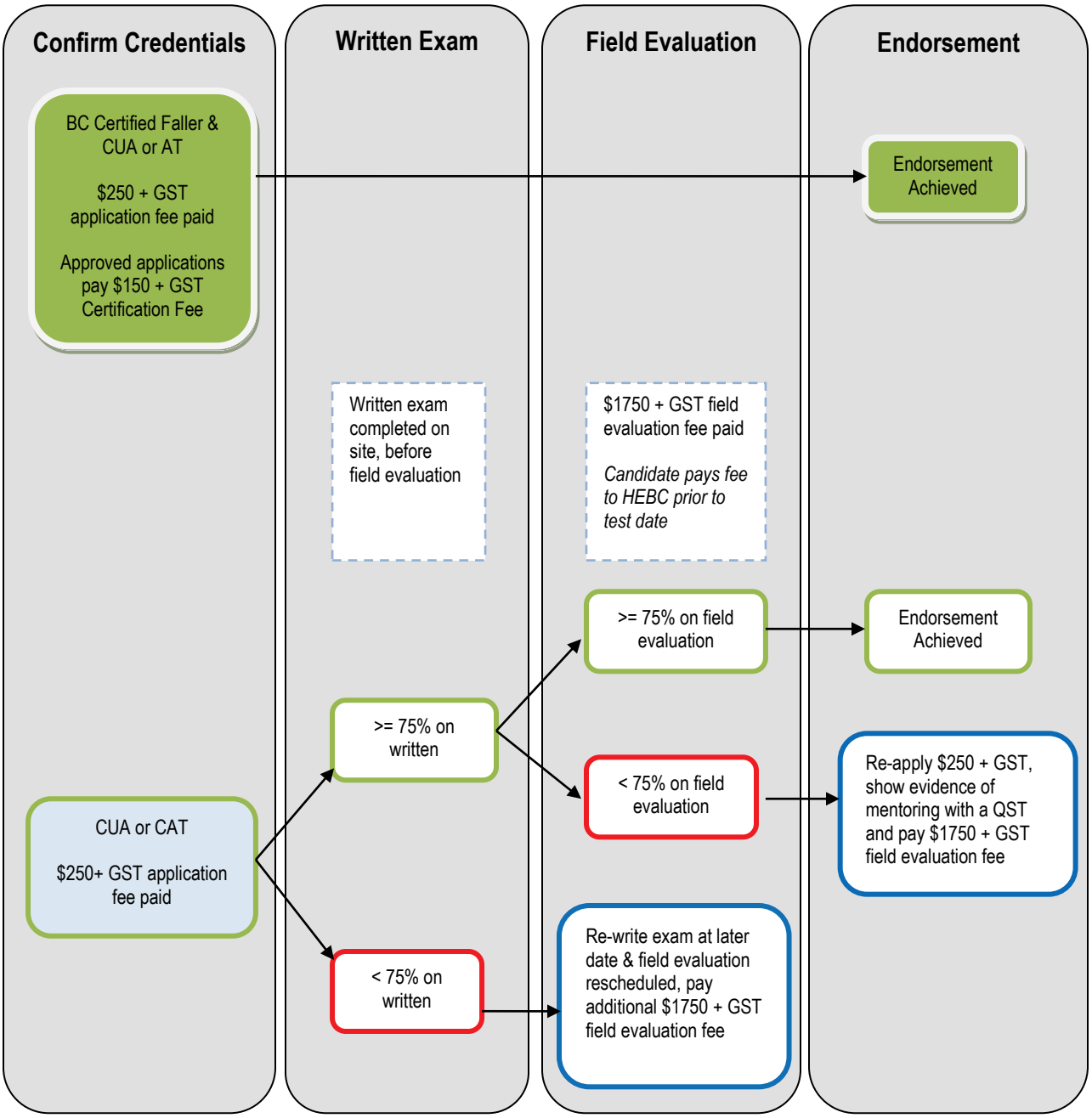
Personal Equipment

- Personal protective clothing - approved bucker pants, caulked or good sole boots, and rain gear
- CSA approved hard hat, hearing and eye protection
- Chain saws (gas) with full wrap around handle adequate for the falling situation
- Axe adequate for the falling situation
- Falling wedges
- Whistle, pressure bandage

Site Required Equipment

- All required first aid supplies and equipment
- Large tarp for first aid station
- Fire suppression equipment
- Communication(s) equipment

Falling and Bucking Endorsement Flow Chart



Field Examination & Evaluation for the WUAA/HEBC Falling & Bucking Endorsement

General Objective: Qualified Assessor will complete a thorough examination of the Certified Utility Arborist or Arborist Technician's work preparation and practice and will identify issues as applied to the BC Faller Training Standard. Non-compliance with the OHS Regulation must be noted and discussed with the Candidate. Any noted deficiencies must meet compliance with Occupational Health and Safety Regulation, as required by the Worker's Compensation Act.

ESTIMATED COMPLETION TIME – 4 Hours

Pass	**Fail**	**Registration Number**
Field Examination percentage mark		
Written Exam percentage mark		

Candidate name:	Supervisor:	Employer	Years of Experience
Home address		BC Certificate Number	Date and Time
Email address			
Location:	Weather	Timber type -species and average DSH	
Occupational First Aid Ticket number and level	Ground conditions:	Slope in percent % Falling: Bucking:	

PART 1 – PERSONAL PROTECTIVE EQUIPMENT

Objective: The Candidate wears and uses the appropriate PPE and ensures that it is properly maintained

Items/Comments	Marking Conditions
Hardhat ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets acceptable measure plus suspension is in good to excellent condition, may or may not have stickers and no other modifications. ❑ **A .07 Acceptable measure:** Contrasting in colour, proper fit, no cracks or dents, suspensions may be dated (over 1 year old), CSA or ANSI compliant. ❑ **U 0** Unacceptable: Fails to meet above acceptable standard, includes any hardhat 5 years or older, wrong colour, improper fit, cracked or dented, suspension broken, CSA or ANSI non-compliant, modifications.
Eye & Face Protection ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets acceptable measure plus also wears safety glasses. ❑ **A .07 Acceptable measure:** Face protection (screen) available, in good condition and consistently used. ❑ **U 0** Unacceptable: Fails to meet above acceptable, includes protection that is not available or if available not used, face protection has small holes present, or has scratched eye glasses or is CSA or ANSI non-compliant
Hearing Protection ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets acceptable measure plus using muffs in good to excellent condition and maintained. ❑ **A .07 Acceptable measure:** Earmuffs available and worn, minor damaged condition or alternate protection used, i.e. wears earplugs. ❑ **U 0** Unacceptable: Fails to meet above acceptable, includes muffs available but casually used not used, not available, poor condition, needs maintenance.
Hand Protection ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets acceptable measure and protection is in good to excellent condition ❑ **A .07 Acceptable measure:** Available and worn, minor damaged condition, appropriate for working conditions. ❑ **U 0** Unacceptable: Fails to meet above acceptable standard, includes not available, not worn, excessively worn condition, not appropriate for working conditions.
Leg Protection ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets acceptable measure and protection is in good to excellent condition ❑ **A .07 Acceptable measure:** Available and worn, minor damage to outer layer, visible label, meets current standard ❑ **U 0** Unacceptable: Fails to meet above acceptable, includes not available, not worn, excessively worn condition, cuts into Kevlar and does not meet current standard.
Hi-visibility Apparel ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets or exceeds acceptable measure and protection is in good to excellent condition ❑ **A .07 Acceptable measure:** Available and worn, minor tears or faded condition, appropriate for situation, meets current standard. ❑ **U 0 Unacceptable:** Fails to meet above acceptable, includes not available, not used, excessively worn or faded condition or does not meet current standard

PART 1 – PERSONAL PROTECTIVE EQUIPMENT CONTINUED

Items/Comments	Marking Conditions
Safety Footwear ***Comments to Candidate:*** **Mark: /.1**	**Caulked:** ❑ **E .1** Meets acceptable measure and protection is in good to excellent condition, fully caulked and sharp. ❑ **A .07 Acceptable measure**: Available and worn, may be missing two or less caulks or slightly dull caulks. ❑ **U 0** Unacceptable**:** Fails to meet above acceptable, includes not available, all caulks need replacing, soles damaged and cracked, stitching worn or not wearing caulks to walk logs. **Non-caulked: only worn when not required to walk on logs or woody debris on level terrain** ❑ **E .1** Meets acceptable measure and protection is in good to excellent condition, well constructed boot, good ankle support and appropriate to conditions. ❑ **A .07 Acceptable measure**: Available and worn, upper soles, minimum 8" top, some grip missing.. ❑ **U 0** Unacceptable**:** Fails to meet above acceptable, includes not available, not used, poorly constructed, damaged stitching, excessively worn soles, less than 8" upper, no traction sole or excessive damaged condition.
Whistle/ Radio ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets acceptable measure and radio checking and receiving regularly, in good condition and whistle mounted near mouth. ❑ **A .07 Acceptable measure:** Whistle mounted on outside of clothing and access to radio ❑ **U 0** Unacceptable: Fails to meet above acceptable, includes whistle not available, not tested regularly, not working
Personal First Aid Kit ***Comments to Candidate:*** **Mark: /.1**	❑ **E .1** Meets acceptable measure, carries a personal first aid kit and contents are clean and dry with first aid gloves. ❑ **A .07 Acceptable measure:** Includes a minimum of a pressure dressing and carried on the person. ❑ **U 0 Unacceptable** Fails to meet above acceptable, includes not available, not worn on person or contents are wet or dirty
Mental Well Being/ Physical Well Being ***Comments to Candidate:*** Discussion Points: - Candidate drinks water throughout day, in all seasons, before work. **Mark: /.1**	❑ **E .1** Meets acceptable, and alert/focused on job, good to excellent attitude. Physically fit, eats and drinks appropriate fluids, does pre work stretching, good to excellent body posture when working ❑ **A .07 Acceptable measure:** Includes focused on job, attitude is acceptable, eats and drinks with some knowledge or nutrition, does some stretching, work is done with some knowledge of body posture concerns. ❑ **U 0** Unacceptable**:** Fails to meet above acceptable, often distracted from job, poor attitude, not physically fit, works in positions that puts self at risk of MSI injury

Total marks for this part: ___/1

PART 2 – IDENTIFY SAFE WORK PROCEDURES

Objective: The Candidate uses safe work procedures when in the field.

Items/Comments	Marking Conditions
Man-check Procedures ○ **E -** Candidate frequently shuts off saw & lifts muffs for safety check of other workers ○ **A -** Candidate shuts off saw between tank fill ups and conducts man check ○ **U -** Qualified assistance is not readily available ○ **U -** Written safe work procedures are not in place for minimum & maximum distances between arborists and other workers. Know maximum distance between chainsaw operators **Mark: /5**	❑ **E 5** Meets acceptable measure and uses start of day, end of shift checks, frequent checks throughout the day, shuts saw off between tanks and after bucking, lifts muffs, and there is a response plan for failure to respond to check. Established and well marked access/egress trails for qualified assistance. ❑ **A 4 Acceptable measure:** Includes frequent checks with partner or person capable of rendering qualified assistance every 20-30 minutes. Written safe work procedures are in place for minimum & maximum distances between arborists and other workers. ❑ **U 0** Unacceptable: Fails to meet above acceptable, non-regular checks, informal checks or no mancheck system at all. Qualified assistance is not readily available to arborist in case of difficulty, emergency, or injury. **Comments to Candidate:**
Transportation of Workers Discussion points: - Valid drivers license - Vehicle facing exit - Documented Pre-trip inspection - by driver - Emergency procedure/numbers - posted in vehicle - ATV - Snow machine - Helicopter - Boat - Crummy - Seatbelt equipped - Non-smoking vehicle - Describe requirements for transporting workers **Mark: /.5**	❑ **E .5** Meets acceptable measure and has a documented pre-trip inspection or specific orientation prior to transporting workers. ❑ **A .4 Acceptable measure:** Includes vehicle that is in good mechanical condition. Parked facing exist route. Tools, equipment are secured and separate from workers. Appropriate communication system is available and working. Fire extinguisher in vehicle. ❑ **U 0** Unacceptable**:** Fails to meet above acceptable, includes vehicle that has mechanical deficiencies. Tools and equipment not separated from passengers. Vehicle not facing the exit. **Comments to Candidate:**

Total marks for this part: ___/5.5

E - Excellent Best Practice A - Acceptable Measure U - Unacceptable Measure

PART 3 – IDENTIFY EMERGENCY AND EVACUATION PROCEDURES

Objective: The Utility Arborist knows and uses emergency and evacuation procedures.

Items/Comments	Marking Conditions
First Aid: Candidate's first-aid ticket: ○ E - Level 1 ○ E - Level 2 ○ E - Level 3 Expiry Date: ____/____/____ M D Y **Mark: /.5**	❑ **E .5** Meets acceptable measure and arborist has minimum of current Level 1 first aid training. ❑ **A .4 Acceptable measure:** first aid kit that meets the requirements of OHS Regulation, knows the location of first aid, and how to initiate emergency procedures. ❑ **U 0** Unacceptable**:** Fails to meet above acceptable, includes first aid that does not meet requirements of OHS regulation and the arborists working without reporting to employer or supervisor. Comments to Candidate:

Total marks for this part: ___/0.5

PART 4 – IDENTIFYING HAND TOOLS AND EQUIPMENT

Objective: The Utility Arborist uses well-maintained hand tools and equipment.

Items/Comments	Marking Conditions
Axe Note: Full size axe is an axe with a minimum 27 inches in overall length and 3.5 lbs. head ○ E - Spare axe readily available ○ U - Axe head & handle length inadequate for timber size and or ability to wedge trees into proper lay **Mark: /1**	❑ **E 1** Meets acceptable measure and axe handle length is appropriate for timber size and body size to prevent MSIs. Spare axe available in falling area (e.g. with spare saw). ❑ **A .75 Acceptable measure:** Includes having axe at the base of tree being felled, pinned or secured head, handle in good condition. If carried on the body, the axe must be in an acceptable carrier, minimum of a 3.5 lbs. head and a minimum of 17" handle length measured from the end of the handle to the start of the axe head. ❑ **U 0 Unacceptable:** Fails to meet above acceptable, includes no axe available at the base of tree being felled, not available in the falling area, or broken handle or head not pinned or secured or an axe of inappropriate size for the timber being felled. Comments to Candidate:
Wedges ○ **E** – 2 extra wedges available in falling area ○ **E** - Candidate checks for stress cracks ○ **A** – 3 appropriate wedges **Mark: /1**	❑ **E 1** Meets acceptable measure and minimum of 3 wedges available at the base of tree being felled, no burrs, appropriate to timber type and weather conditions. Minimum of two extra wedges available. ❑ **A .75 Acceptable measure:** Includes 3 wedges appropriate for timber size and available at the base of the tree being felled. ❑ **U 0 Unacceptable:** Fails to meet above acceptable , includes no wedges at the base of tree being felled. No wedges available. Comments to Candidate:

Total marks for this part: ___/2

PART 5 – DETERMINE CHAINSAW SUITABILITY

Objective: The Candidate chooses a suitable chainsaw for the task.

Items/Comments	Marking Conditions

Chainsaw Criteria and Safety Features:
 	
Idle adjustment
 	
○ Saw type:
○ Bar length:
○ Modified muffler impacting on man-check
○ Modified saw
○ Handle bar type:
  ○ A – Chain Catcher in place
  ○ U- Modified muffler impacting on man-check
  ○ U- Modified saw
 	
Mark: /3
	❑ **E (3)** Meets acceptable measure, spare chainsaw with full wrap handle bars readily available.
	❑ **A (2) Acceptable measure** includes chainsaw with manufacturers full wrap handlebars and adequate falling dogs, meets CSA standard including a functioning chainbrake. Chainsaw and bar length compatible to timber size. Chainsaw in good operating condition, all safety features functioning, idle properly adjusted.
	❑ **U (0)** Unacceptable include; chainsaw without manufacturers' full wrap handlebars and with no dogs, doesn't meet CSA standard, chainbrake doesn't function, modified muffler, saw is not being properly maintained, damaged components.
	
	Comments to Candidate:

Total marks for this part: ___/3

PART 6 – PRACTICE CHAINSAW MAINTENANCE

Objective: The Candidate maintains the chainsaw for the task.

Items/Comments:	**Marking Conditions**
Chainsaw Filing: **Tensioning of Chain** o Ground o Hand-filed File size: Chain size: o 3/8 o 404 Chain type: o Regular o Safety o Skip tooth o Full House **Mark: /3**	❑ **E 3** Meets acceptable standard and raker gauge is available and consistently used ❑ **A 2 Acceptable measure** includes chain properly tensioned, bar and tip in good condition, cutter teeth evenly and equally filed. Chainsaw cuts smoothly, files and tools are available. If ground chain is used it must be ground to manufacturers specifications. ❑ **L 1 Least acceptable** include gullet not filed out to prevent kickback hazard or causing double cutting by the chain (e.g. chatter or rough chain cuts left on the stumps). ❑ **U (0)** Unacceptable include chain improperly tension (i.e.: too loose or too tight), bar and tip worn out, rakers not filed properly, cutter teeth uneven. Chainsaw cuts roughly, broken chain links. File tang not protected. Comments to Candidate:

Total marks for this part: ___/3

PART 7 – DEMONSTRATE CHAINSAW OPERATION

Objective: The Candidate can safely use the chainsaw for the task.

Items/Comments	Marking Conditions
Carrying the Saw & Tools, In and Out of Falling Area Comments to Candidate: **Mark: /2**	❑ **E (2)** Meets acceptable measure and trails marked and communicated to emergency personnel. ❑ **A (1.5) Acceptable measure** include properly cleared trail, bar and chain pointed behind on downhill side, gas and oil carried in opposite side. Saw carried on shoulder for long distance with chain and saw dogs effectively guarded. ❑ **U (0)** Unacceptable include no trail, saw carried on shoulder without chain and dogs guarded.
Carrying the Saw Tree to Tree or Bucking o Saw shut off & man-check conducted with lifted earmuff o Saw shut off between falling or bucking and lifts earmuffs Comments to Candidate: **Mark: /2**	❑ **E (2)** Meets acceptable measure and chain brake activated between cuts, chainsaw shut off on regular basis or when moving longer distances. ❑ **A (1.5) Acceptable measure** include chain properly adjusted to prevent a running chain. ❑ **U (0)** Unacceptable include carrying a chainsaw with a running chain
Starting the Chainsaw Chainbrake engaged to control saw during fast idle start Comments to Candidate: **Mark: /2**	❑ **E (2)** Meets acceptable measure and chainbrake is engaged prior to controlled start of saw. ❑ **A (1.5) Acceptable measure** includes controlled start of the saw. ❑ **U (0)** Unacceptable: includes uncontrolled/unsupported start of saw.
Chainsaw Handling Techniques o Candidate switches hands to maintain control of saw and to prevent MSI o Changes hands to be in a safe bucking position o Backbarring while falling o Doesn't overreach with saw Comments to Candidate: **Mark: /2**	❑ **E (2)** Meets acceptable measure and can use chainsaw smoothly and effectively with left or right hand. Removes all hindrances to safe cutting. ❑ **A (1.5) Acceptable measure** include hands on chainsaw at all times, comfortable grip, 3-point stance, solid footing, body to one side, pulls chainsaw smoothly out of cuts, and is prepared for kickbacks at all times and doesn't overreach. Backbarring limited to small (6 DBH) saplings, under bucking and removal of stump whiskers. ❑ **U (0)** Unacceptable include one hand on chainsaw, over reaches when cutting, stands directly behind chainsaw, not prepared for kickbacks, poor body positioning and footing.

Total marks for this part: ___/8

PART 8 – REVIEW PLAN OF WORKSITE

Objective: The Candidate plans before falling.

Items/Comments	Marking Conditions
Start of New Worksite/Initial Safety or Tailboard Meeting o Site-specific hazards: **Mark: /1**	❑ **E (1)** Meets acceptable measure and includes Candidate understanding any special safe work procedures, able to match worksite map to ground layouts. Safety meeting includes communication procedures, first aid, worksite map and site hazards. Evac Helipad location pre-determine ❑ **A (.75) Acceptable measure** includes participating in initial safety meeting for falling area. ❑ **U (0)** Unacceptable include not participating in initial safety meeting, map not available, lacks knowledge of work area. Comments to Candidate:
Entering an Active Falling Area o Hailed Candidate from outside two tree lengths o Candidate shuts off saw o Asked if safe to enter o Asked if anything cut up o Permission granted by Arborist o Saw remained shut off while entering area o Exit plan discussed and agreed to with Candidate **Mark: /1**	❑ **E (1)** Meets acceptable measure and while entering or leaving area the arborist gives direction to the safe route in or out. Candidate understands his responsibilities for safety of workers while they are in his area. Exit plan in place with arborist. ❑ **A (.75) Acceptable measure** include understanding and use of safe work procedures, that include signage, 2-tree length rule, proper approach, voice and eye contact, chainsaw off, Candidate stops work and grants permission to enter. ❑ **U (0)** Unacceptable include not having or using safe work procedures. Allows persons or machines into falling area, continues to work after they have been hailed to stop. Candidate working without signage Comments to Candidate:

Total marks for this part: ___/2

PART 9 – RECOGNIZE ADVERSE WEATHER HAZARDS

Objective: The Candidate uses safe work procedures in adverse weather.

Items/Comments	Marking Conditions
○ **Adverse Weather Conditions** **Given extreme weather conditions (fog, wind, lightning, snow, extreme temperatures, rain etc), workers are able to follow appropriate safe work procedures** **Candidates are able to describe the hazards associated with the different weather conditions** **What effects weather has on helicopter evacuation procedures?** **Whose call is it for wind?** **Whose call is it for fog?** ○ **The Candidate** ○ **Candidate is aware of site specific shutdown criteria** **Mark: /1**	❑ **E (1)** Meets acceptable measure and Candidate knows when to shut down due to adverse weather condition, has site specific knowledge of emergency response to adverse weather conditions and has a personal emergency response plan. ❑ **A (.75) Acceptable measure** includes Candidate wearing and or has available clothing appropriate to conditions. Candidate is aware of weather related shut down criteria. Emergency access/egress concerns assessed.. ❑ **U (0)** Unacceptable includes candidate is improperly dressed for conditions, unaware of weather related shut down criteria. Comments to Candidate: ❑ **Observed** ❑ **Reviewed**

Total marks for this part: ___/1

PART 10 DEMONSTRATE PROCESS OF FALLING

Objective: The Candidate uses safe work procedures when preparing to fall.

Items/Comments	Marking Conditions
Site Assessment ○ Candidate has a step-by-step falling plan that was discussed with Qualified Assessor before the falling of any timber. This included the safe area for the Qualified Assessor to observe. ○ Daily falling plan discussed with crew. ○ Candidate is aware of area hazards or other crews in area ○ Candidate describes when and how often the site assessment is done **Mark: /3**	❑ **E (3)** Meets acceptable measure and arborist has developed a step by step plan on how the area will be felled and how significant hazards will be addressed. Concerns are discussed with supervisor or person qualified to provide assistance. ❑ **A (2.25) Acceptable measure** include walking the falling area prior to falling, takes note of overhead, ground, area hazards (terrain), and other worksite hazards (other activities). ❑ **U (0)** Unacceptable include Candidate begins work without walking the falling area, no work plan developed. Comments to Candidate:
Prepare to Fall the Tree ○ Tree assessed from top to bottom for defects or hazards ○ Tree lean assessed from high side ○ Escape trails brushed out ○ Saplings felled for visibility ○ Snags felled before trees ○ Safety cuts made and debris removed to prevent tripping ○ Tree felled to prevent brushing ○ Axe at base of tree before any cuts are made ○ Snow stomped and shoveled Candidate describes 10 items to be assessed in tree assessment **Mark: /4**	❑ **E (4)** Meets acceptable measure and constructs escape route(s) and tests, removes all tripping hazards, preps several trees, tree placement considers bucking and avoids brushing. ❑ **A (3) Acceptable measure** include Candidate assesses tree for lean from high side. Candidate assesses tree for overhead and ground hazards, tree defects, plans and prepares escape routes, plans tree placement. Chainsaw is fueled up, chain sharp. ❑ **U (0)** Unacceptable include Candidate begins falling tree without doing a full assessment of the tree and immediate work area. No escape route constructed. Comments to Candidate:

Total Marks for this Part ___/7

PART 11 – FALLING A TREE

Objective: The Arborist uses safe work procedures when falling.

Items/Comments	Marking Conditions
Falling the Tree ○ Uses sight lines to construct undercut with saw dogged in ○ Good body position (one knee) ○ Look up before, during and after falling ○ Uses chainbrake when checking undercut ○ Knocked out undercut with axe ○ Checks & cleans out undercut ○ Resighted undercut ○ Cleans off duff or bark for wedge placement ○ Sighted backcut through undercut and saw dogged in while making backcut ○ Uses chain brake when checking outside corner of holding wood ○ Palmed a wedge ○ Set the wedge ○ Strikes wedge & looks up & waits for the energy to travel to the tree top before striking wedge again ○ When tree is committed to the fall, moves away from stump to cover(escape into timber not into the open min. 3 meters or 10 feet) ○ Waits for canopy to settle down before returning to the stump ○ Back at the stump checks canopy again before backbarring whiskers off stump Unacceptable ○ Backbarring: **Mark: /15**	❑ **E (15)** Meets acceptable measure and brushes out escape route and uses saw sight lines to construct undercut/backcut. Body position meets MSI prevention, wedges placed as soon as possible. Escapes 10 feet away from stump and takes cover when available. Waits for canopy to stabilize before returning to stump. Removes stump pull. ❑ **A (12) Acceptable measure** include tree assessment completed, escape route brushed out, undercut/backcut appropriate, backbarring limited to small saplings, and removing whiskers/bark to shoot debris away from Arborist, uses wedges when required, tree falls in intended direction, works on the high side of the tree and escapes 10 feet from stump and takes cover when available. ❑ **U (0)** Unacceptable include fails to assess tree, no falling plan, inadequate undercuts or backcuts, fails to escape or take cover. Domino falls. Comments to Candidate:

Total marks for this part: ___/15

PART 12 – DEMONSTRATE USE OF AXE AND WEDGES

Objective: The Candidate uses safe work procedures and equipment when preparing to fall.

Items/Comments	Marking Conditions
Use of Axe, Wedges & Wedging Technique ○ Candidate acknowledges that tree must be wedged ○ Proper axe at tree ○ Uses saw sight lines ○ Uses minimum 1/4 undercut ○ Uses chain brake to check undercut ○ Knocked undercut out with axe ○ Cleans out undercut with dogs or axe ○ Cleans duff & bark for wedge placement ○ Looks up stem ○ Sights backcut through undercut ○ Uses chainbrake when checking outside corner holding wood ○ Palms a wedge ○ Set the wedge ○ Set second wedge ○ Strikes wedge and looks up stem, waiting for the energy to reach the tree top ○ Shuts off saw to wedge tree with ear muffs raised ○ Strikes wedges alternately while using face screen ○ As tree falls moves away to cover ○ Waits for canopy to settle down before returning to stump Candidate describes the advantage of 1/4 undercut **Mark: /4**	❑ **E (4)** Meets acceptable measure, undercut is 1/4 of the tree diameter. Cleans bark/duff prior to wedging. Wedge inserted into backcut on every tree. Candidate looks up after striking the wedge for energy to move up the tree, alternately strikes 2 wedges to lift the tree. ❑ **A (3) Acceptable measure** include wedging tools available at tree being felled. Appropriate axe being used. Wedge inserted into backcut as soon as possible. Candidate looks up to assess tree movement and hazards during wedging. Appropriate wedge or wedges are used to lift the tree the required distance. ❑ **U (0)** Unacceptable include wedging tools not available at the tree or in the falling area. Only 1 wedge, fails to look up when wedging. Candidate not using appropriate wedging tools such as unpinned axe and wedges with burrs. Candidate plans to push versus wedging. Comments to Candidate:

PART 12 – DEMONSTRATE USE OF AXE AND WEDGES CONTINUED:

Items/Comments	Marking Conditions
Demonstrate placing a tree or stub ○ Describe the use of a wedge to secure a tree versus the use of a wedge to lift a tree (change the tree's attitude) ○ Use of a wedge to place a stub in intended direction ○ Bar length suitable to timber size ○ Uses saw sight lines ○ Setup to tree to get chainsaw dog in position for the optimal directional control **Mark: /4** Questions – must be answered correctly Describe adequate means of control. Describe the difference between adequate means of control and controlling the direction of fall using cuts and wedges. Ask -Can a CUA or AT use only cuts and wedges to control the direction of fall of a tree in a utility line clearing operation?	❑ **E (4)** Meets acceptable measure and inserts wedge as soon as possible in offset location. Holding wood angle is off set to ensure that the tree falls in intended direction, by using the saw sight lines to check the amount of holding wood left. Sightlines are used in all falling cuts. ❑ **A (3) Acceptable measure** include arborist evaluates the tree as to the ability to directional fall the stem, based upon tree condition and size. Candidate uses saw sight lines to make undercut that places the tree in the intended direction of fall. Checks holding wood to ensure that it is maintained on the low side. Tree falls into intended direction. ❑ **U (0)** Unacceptable include tree fails to fall in intended direction due to holding wood cut off or inadequate undercut/backcut. Stub or length of tree is of a length to violate LOA of nearby conductors. Comments to Candidate:

Total marks for this part: ___/8

PART 13– RECOGNIZE DANGEROUS FALLING PRACTICES

Objective: The Candidate recognizes dangerous falling practices.

Items/Comments	Marking Conditions
Brushing ○ Trees felled to avoid brushing other timber ○ No brushing observed along falling face ○ Minor brushing observed ○ Trees were brushed from holding timber tight to face ○ Trees only brushed while opening up face ○ No brushing of saplings, short stump stubs or snags ○ Brushed tree felled prior to any other work activities **Mark: /3**	❑ **E (3)** Meets acceptable measure and removes trees with large limbs or multiple tops, ensures adequate clearance from falling face. Does not brush standing trees with trees being felled. ❑ **A (2.5) Acceptable measure** include creating a safe area to open up the falling face, uses natural openings, removes saplings and dangerous trees, follows the falling plan. ❑ **U (0)** Unacceptable include regularly brushing standing timber with trees being felled, fails to remove dangerous trees, saplings and other obstruction to falling. Comments to Candidate: ❑ **Observed** ❑ **Reviewed**

Total marks for this part: ___/3

PART 14 – MANAGE FALLING HAZARDS

Objective: The Candidate uses safe work procedures when falling in difficult situations.

Items/Comments	Marking Conditions
Up Slope Falling Questions if situation not available - .25 marks for each correct answer. Ask: What are the hazards? o Tree sliding back/tree kicking up in air/limbs striking Arborist as it slides backwards or tree butt hitting Arborist Ask: With slopes 45% or greater, what is the maximum degree upslope that is acceptable? o 15 degrees Ask: At what percent of ground slope does it become dangerous to fall a tree straight up the hill? o 45% Ask: What falling cuts must be used? o Open face undercut with predetermined backcut height **Mark: /1**	❑ **E (1)** Meets acceptable measure and uses specialty undercut, 90 degree escape route more than 10 feet and takes cover, Candidate stops and seeks qualified assistance when 15 degrees cannot be maintained. ❑ **A (.75) Acceptable measure** include trees are felled at or near 15 degrees up slope, planned and cleared escape route, higher backcut. ❑ **U (0)** Unacceptable include trees are felled up slope consistently above 150 degrees up slope, backcut lacks step, no escape routes. ❑ **Observed** ❑ **Reviewed** Comments to Candidate:
Heavy Leaners Questions if situation not available - .5 marks for each correct answer. Ask: What are the hazards? o Root/stump/mat pull o Barber chair o Pinched saw Ask: What falling cuts would you use to prevent the hazards? o Corner up or side strap the low & high sides, leaving a strap in the back to finish o Could also bore just behind holding wood to reduce pressure before finishing backcut o Candidate describes the advantage of ¼ undercut o Candidate describes various ways to put in backcut **Mark: /2.5**	❑ **E (2.5)** Meets acceptable measure and roots and tree are assessed for stability and soundness. Tree felled slightly off lay to lessen stump pull. ❑ **A (2) Acceptable measure** include assessing tree as a heavy leaner, undercut no more than ¼ tree diameter. Backcut is constructed by cornering the low side, then high side completed by cutting middle holding wood. Candidate watches for stump pull. Tree felled with lean. ❑ **U (0)** Unacceptable standards include failing to assess tree as a heavy leaner, deeper undercut than ¼ tree diameter, no attempt to corner up, backcut lower than undercut. ❑ **Observed** ❑ **Reviewed** Comments to Candidate:

PART 14 – MANAGE FALLING HAZARDS CONTINUED

Limb Tied Trees Question if situation not available 0.5 marks for each correct answer. Ask: What are the hazards? o Over head hazards o Front cut-up tree could fall unexpectedly o Front tree could be dangerous Ask: What are the safe work procedures? o Assess both trees o Bushes out escape trails o Cut-up front tree, sets wedge o Falls second tree, and move to cover **Mark: /4**	❑ **E (4)** Meets acceptable measure includes limbed tied kept in sight at all times, chainsaw sight lines used to determine direction of fall. Full size axe readily available. ❑ **A (3) Acceptable measure** includes both trees are assessed for hazards and defects. Two escape trails constructed (1 for each tree), proper falling cuts used and wedges set. ❑ **U (0)** Unacceptable include fails to meet above acceptable standard, includes not looking up, no escape trails. NOTE: Alternate method if the front tree is suspect: Put the undercut in back green tree first, then place falling cuts and set wedge in front tree, move to the back tree and finish the backcut, moving away to cover. Candidate explain the advantage of this procedure and when not to be used ❑ **Observed** ❑ **Reviewed** Comments to Candidate:

PART 14 – MANAGE FALLING HAZARDS CONTINUE

Dangerous Trees **Safe Work procedure:** .25 marks for each correct answer if situation not available. ○ Fuel up saw first ○ Uses correct bar length ○ Assess stability of dangerous tree ○ Look up before, during and after ○ Sound snag with axe ○ Brushes out two escape routes while facing the hazards ○ Undercut depth 25% to 40% ○ Places cuts at comfortable stump height ○ Knockout undercut then look up ○ Candidate checks sawdust color ○ Back cut appropriate height above undercut ○ Palms two wedges ○ Shuts saw off/lifts ear muffs ○ Rechecks escape routes ○ Alternately taps the 2 wedges ○ As snag falls moves to cover ○ Stays behind cover longer than normal before returning to the stump ○ At the stump immediately looks back in the canopy for hazards **Mark: /4**	❑ **E (4)** Meets acceptable measure and two escape routes constructed, cleared and tested. Assesses tree soundness and monitors tree sawdust for change indicators; wedges when only absolutely necessary, uses proper bar length, shuts off saw, removes hearing protection when wedging and removes high stump. ❑ **A (3) Acceptable measure** include performing a full tree assessment, dangerous tree is felled into open area, felled with lean if possible, comfortable stump height, watches top for movement or failure, and predetermines higher back cut height. ❑ **U (0)** Unacceptable include fails to meet above acceptable standard, includes failing to perform a full tree assessment, dangerous tree felled into standing timber, no escape routes excessively large undercut (ie 50% of tree diameter, heavy wedging, not removing hearing protection when wedging, backcut below undercut. NOTE: If conventional methods cannot be safely employed to remove a dangerous tree - other acceptable methods must be used. ❑ **Observed** ❑ **Reviewed** Comments to Candidate:

Total marks for this part: ___/11.5

PART 15 – IDENTIFYING SPECIAL FALLING TECHNIQUES

Objective: The Candidate uses special falling techniques in difficult situations.

Items/Comments	Marking Conditions
Falling Against the Lean/Small diameter tree 0.25 marks for each correct answer if situation not available. Ask: What are the hazards? ○ Tree can fall backwards & hang up in standing timber ○ Loss of directional control can cause brushing of other trees ○ Tree if cut off could strike Arborist Ask: How do you fall against the lean? ○ Predetermine backcut height first and sets wedge ▪ Saw undercut slightly below backcut to limit vertical holding wood ▪ Shut off saw and wedge tree over using 2 wedges if required. **Mark: /1.5** ❑ **Observed** ❑ **Reviewed**	❑ **E (1.5)** Meets acceptable measure and Candidate does assessment that determines that falling against the lean is necessary. Under cut is slightly below backcut, sets 2 wedges if required, wedges are struck alternately to bring tree over. ❑ **A (.75) Acceptable measure** include constructing backcut first, then setting a wedge as soon as possible, finishes backcut while maintain adequate holding wood, constructs undercut slightly below backcut to provide an anti-kickback step and assist wedging. ❑ **U (0)** Unacceptable include Candidate doesn't do tree assessment, undercut constructed first and too deep (50% of diameter), wedge not set, tree sets back and may fall over backwards. ***NOTE: How do you fall against the lean?*** ❑ ***Backcut first & set wedge (s)*** ❑ ***Saw in undercut at least 2 inches below backcut*** ❑ ***Shut off saw and wedge tree over using two wedges if required*** Comments to Candidate:
Short Stubby Tree 0.25 marks for each correct answer if situation not available. ***NOTE: How do you fall these stubby trees?*** ○ ***Candidate assess stability of stem*** ○ ***Construct large open deep undercut up to 50% when needed*** ○ ***Backcut sawn in slightly above undercut*** ○ ***Palm a wedge*** ○ ***Do not cut off the holding wood as it will sit down on stump*** ***If wedging required, shut off saw, lift ear muffs and wedge watching the top, be prepared to escape quickly*** **Mark: /1.5** ❑ **Observed** ❑ **Reviewed**	❑ **E (1.5)** Meets acceptable measure and uses specialty falling techniques with a larger undercut and backcut slightly above undercut. ❑ **A (.75) Acceptable measure** include assessing the tree as short stubby tree, checks for defects and hazards and removes it, constructs escape route(s). ❑ **U (0)** Unacceptable include failing to assess and doesn't remove short stubby trees. **What are the hazards?** ❑ **Stem could be unstable & collapse** ❑ **Falling tree striking the stub can cause the tree to kickback over the stump or kick sideways** ❑ **Difficult to fall due to all the weight being at the base** ❑ **Lack of a deep undercut which can result in holding wood being cut off** ❑ **Risk to harvesting crew** ❑ **Lack of clean escape trail** Comment to Candidate:

PART 15 – IDENTIFYING SPECIAL FALLING TECHNIQUES, CONTINUED:

Items/Comments	Marking Conditions
Re-falling a tree which has previous cuts in it. What are the hazards? ○ Tree can sit back and barber chair over backwards striking the Candidate or become hung up in the standing timber ○ Tree can pinch the Candidate's saw ○ Tree can fall in the original intended direction while the Candidate is attempting to fall it in the new direction ○ The tree can spilt vertically between the falling cuts while the Candidate is attempting to fall it in the new direction **Mark: /1**	Marking Conditions ❑ **E (1)** Meets acceptable measure and new falling cuts are made as high as possible from previous cuts, makes new escape trail while facing the cut-up tree. ❑ **A (.75) Acceptable measure** include Candidate has assessed tree and cannot set wedge or use pusher tree, makes new falling cuts as high as possible above previous cuts, falls tree in direction of new lean, makes new escape trail. ❑ **U (0)** Unacceptable include Candidate failing to assess tree and simply cuts the tree off the stump. ***NOTE: How do you re-fall a cut up tree?*** ❑ ***Never turn your back on this tree or go in front of it*** ❑ ***Brush out a new escape trail by cutting towards the tree so you can watch it*** ❑ ***Make the new falling cuts as high as possible and off set from the original undercut*** ❑ ***Do not make the new undercut too deep*** ❑ ***Watch for vertically splitting of the stem*** ❑ ***Be prepared to move away quickly*** Comments to Candidate: ❑ **Observed** ❑ **Reviewed**

Total marks for this part: ___/4

PART 16 – DEMONSTRATING SAFE LIMBING

Objective: The Candidate limbs safely.

Items/Comments	Marking Conditions
Limbing ○ Candidate conducts good assessment of tree lay. ○ Checks the canopy for over head hazards ○ Uses face screen for limbing ○ Cut limbs flush with stem. ○ Double cuts heavy limbs ○ Removes limbs from stem to prevent tripping ○ Chooses log lengths for safe bucking area taking in consideration pivot points, bind and tree position ○ Doesn't cross body with the saw, moves his feet ○ Doesn't over reach with saw on a regular basis ○ Bucks limbs both ways on the stem to prevent over reaching ○ Set chain brake while walking back to bucking position Ask- What is the procedure for spring pole hazards? **Mark: /.5**	❑ **E (.5)** Meets acceptable measure and posture of limbing does not consistently reach or extend body, doesn't cross body with saw, removes loose limbs. ❑ **A (.4) Acceptable measure** include assessing tree, looking at tree stability, secure footing, maintain supporting limbs, flush cuts limbs, loaded limbs, removed in sections. Wears eye and face protection while limbing. ❑ **U (0)** Unacceptable include not assessing tree for stability, leaves stubs, cuts supporting limbs. Comments to Candidate:

Total marks for this part: ___/.5

PART 17 – DEMONSTRATING THE BUCKING PROCESS

Objective: The Candidate bucks logs safely.

Items/Comments	**Marking Conditions**
Bucking Cuts: ○ Checks the surrounding area for potential chain reactions such as sliding or rolling logs ○ Rechecks canopy ○ Reassess tree stability after limbing ○ Checks for obstacles that could cause the tree to pivot, roll or move ○ Determines high side and direction of gravity pull ○ Checks for hidden limbs or pinned saplings. ○ Identify the binds. ○ Plans the sequence of cuts. ○ Bucked log lengths at or near the pivot points. ○ Determine and brushed out a safe bucking position on the high side ○ Ensured stable footing ○ After completing each cut used chain brake and reassess tree before making other bucking cuts ○ Used axe and wedge or spare saw when pinched ○ When finished bucking shut off saw and lifts ear muffs to conduct man-check Ask – What are the binds that need to be identified? Ask - Candidate about wedge use in closing cuts and cutting "V" notches in heavy binds Candidate must demonstrate either ❑ Log length ❑ Ground debris ❑ Blowdown **Mark: /10**	❑ **E (10)** Meets acceptable measure and cuts match and are complete, no potential chain reactions such as sliding and rolling. Checks surrounding area for splitting of log, makes V-cut on excessive binds. Uses axe and wedge to free saw if pinched or uses spare saw. ❑ **A (7.5) Acceptable measure** include Candidate assesses the area for overhead hazards, assesses the tree for bind and stability, ensures there are no loose objects above or behind, clears adequate escape, has secure footing, and prepares for kickback. Cuts are straight, bucking cuts are completed, limited splitting of log. ❑ **U (0)** Unacceptable include Candidate begins cutting without assessment of binds, cuts are crooked and incomplete, mismatched, chainsaw is constantly stuck **Complete Bucking Cuts Evaluation Sheet** Based on 10 bucking cuts, faller must demonstrate either: log length, ground debris or blowdown - *total up the bucking points to determine final mark* **TOP BIND** Cut #1: ❑ 1 ❑ 0.75 ❑ 0 Cut #2: ❑ 1 ❑ 0.75 ❑ 0 Cut #3: ❑ 1 ❑ 0.75 ❑ 0 Cut #4: ❑ 1 ❑ 0.75 ❑ 0 Cut #5: ❑ 1 ❑ 0.75 ❑ 0 ***Comments to Candidate:*** **BOTTOM BIND** Cut #1: ❑ 1 ❑ 0.75 ❑ 0 Cut #2: ❑ 1 ❑ 0.75 ❑ 0 Cut #3: ❑ 1 ❑ 0.75 ❑ 0 Cut #4: ❑ 1 ❑ 0.75 ❑ 0 Cut #5: ❑ 1 ❑ 0.75 ❑ 0 ***Comments to Candidate:***

Total marks for this part: ___/10

PART 18 – DEMONSTRATE FALLING CUTS

Objective: The Candidate uses safe work procedures when making falling cuts.

Items/Comments	Marking Conditions
Undercuts & Backcuts * Note: If the candidate determined that the tree had to be wedged the undercut depth should be ¼ of the tree diameter *Note: Timber 60 inches or more in diameter can have the heart wood cut out of the stem, but holding wood must be maintained on both corners of the stump to maintain control of the tree. *Note: Short stubbys can have an undercut up to 50% *Note: Reference Info Flips *Note: All undercuts are 1/4 to 1/3 tree diameter good, review the advantages if 1/4 undercuts **Total stump points divided by the number of stumps assessed=mark awarded**	❑ **E (15**) Preferred undercut and backcut are straight & level and completed from high side. Preferred undercut selected for: wedging, timber type and terrain. Undercut is cleaned out and is the preferred percentage of tree diameter. The undercut opening is of the preferred ratio for the type of undercut selected. Holding wood and preferred anti-kickback step are maintained across the entire stump. (see table below) Also see *Note ❑ **(14)** Preferred undercut and back cut are straight & level and completed from high side. Undercut is 1/4 to 1/3 of the tree diameter and is angled to ensure that the opening is at least ½ the length of the top cut. Undercut is cleaned out. Holding wood is maintained across the entire stump. Also see *Note ❑ **(13)** Meets acceptable measure and depth of undercut is 1/3 tree diameter. Holding wood is maintained across the entire stump. Also see *Note ❑ **A (12**) **Acceptable measure**: Includes appropriate undercut and backcut are completed from high side, are slightly off level, depth of the undercut between 25% and 40% of the tree diameter. Undercut is leaned out. The cuts forming the opening of the undercut are 1/3 to ½ the length of the top cut. Backcut is slightly above the undercut, slightly off level. Holding wood is preferably maintained across the entire stump but at minimum must be on both corners. Also see *Note ❑ **(3)** Undercut is off level, not cleaned out or corrected, too deep or too shallow over 40% or less than 25% of diameter opening is less than 1/3 the length of the top cut. Backcut is flush to undercut – no step. Excessive holding wood left on the low side of the stump. ❑ **U (0**) Unacceptable: Fails to meet the acceptable standard, undercut 50% or greater of the tree diameter, no undercut, dutchman, backcut is below undercut, holding wood is cut off. Tree splits or barber chairs and there is excessive slope from back-barring.

Anti-kickback Step Reference Guide in Relation to Stump Diameter

75% of the anti-kickback step must be within the preferred height tolerances, as listed below

Humbolt undercuts	Preferred anti-kickback step
Up to 36″ (3′-0″)	diameter ¾ - 1 inch height difference
48” (4’-0”) to 60” (5’-0”)	1 ½ inch height difference
72” (6’-0”) to 84” (7’-0”)	2 inch height difference
96” (8’-0”) to 108” (9’-0”)	3 inch height difference
120” (10’-0”) to 144” (12’-0”)	4 inch height difference
156” (13’-0”) diameter and above	6 inch height difference
Conventional and Open face undercuts	**Preferred anti-kickback step**
Up to 14″ (1′-2″)	¾ - 1 inch height difference
16” (1’-4”) to 36” (3’-0”)	2 inch height difference
48” (4’-0”) to 60” (5’-0”)	3 inch height difference
72” (6’-0”) to 84” (7’-0”)	4 inch height difference
96” (8’-0”) to 108” (9’-0”)	6 inch height difference
120” (10’-0”) to 144” (12’-0”)	8 inch height difference
156” (13’-0”) diameter and above	12 inch height difference

Total Marks for this part ____/15

PART 18B – DEMONSTRATE FALLING CUTS

Total stump points divided by the number of stumps assessed equals final mark awarded

Stump #	Tree Species	Ground Slope%	Dia. inches	B/C inches	U/C inches	U/C depth%	U/C type	U/C opening	Backstep Highside inches	Backstep Lowside inches	Score
1											/15
2											/15
3											/15
4											/15
5											/15
6											/15
7											/15
8											/15
9											/15
10											/15
11											/15
12											/15
13											/15
14											/15
15											/15
										TOTAL (out of 15)	/15

STUMP COMMENTS -

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

FIELD EXAMINATION AND EVALUATION GRAND TOTAL:

Number and Title	Observed or Written?	Excellent/ Acceptable/ Unacceptable	Mark
Part 1 – Personal Protective Equipment			/1
Part 2 – Identifying Safe Work Procedures			/5.5
Part 3 – Identifying Emergency and Evacuation Procedures			/.5
Part 4 – Identifying Hand Tools and Equipment			/2
Part 5 – Determining Chainsaw Suitability			/3
Part 6 – Practicing Chainsaw Maintenance			/3
Part 7 – Demonstrating Chainsaw Operation			/8
Part 8 – Review Plan of Falling Area			/2
Part 9 – Recognize Adverse Weather Conditions			/1
Part 10 – Demonstrate Process of Falling			/7
Part 11 – Falling a Tree			/15
Part 12 – Demonstrate Use of Axe, Wedges, and Directional Control			/8
Part 13 – Recognize Dangerous Falling Practices			/3
Part 14 – Manage Falling Hazards			/11.5
Part 15 – Identifying Special Falling Techniques			/4
Part 16 – Demonstrating Limbing			/.5
Part 17 – Demonstrating the Bucking Process			/10
Part 18 – Demonstrate Falling Cuts			/15
Passing Mark is 75 and must achieve at least an acceptable standard (E or A) in all parts.			
GRAND TOTAL			**/100**

Restrictions
I acknowledge that comments and any recommendations, resulting from my Field Evaluation and Examination made have been discussed and are noted on this form.

Signature of Candidate	Date
This is to certify that I have reviewed the above-named Candidate according to the WUAA/HEBC Falling & Bucking Endorsement and have discussed comments and recommendations, as written on this form.	
Name of Qualified Assessor	Date
Print : Sign :	QST Number :