

Risk Assessment Analysis					Project Risk Assessment					Project: Tree Climbing	
Identification of Hazards and Risk Assessment										Mission Objectives:	
Subsystem	PRE-MITIGATION				Mitigation(s), Warnings and Reminders	POST-MITIGATION					
	Hazards (Loss of)	Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level	Additional Local Mitigation	Acceptable Yes/No	
Training & Certification	Lack of knowledge and skill to use equipment and work practices safely	Probable	Catastrophic	HIGH	All employees performing tree climbing duties will complete the Forest Service National tree climbing comprehensive training program and receive certification before being allowed to climb.	Remote	Catastrophic	SERIOUS			
	Lack of experience to implement training properly	Occasional	Catastrophic	HIGH	Tree climbing shall be completed in pairs with a more experienced certified climber present; no climbing shall ever be performed alone.	Remote	Catastrophic	SERIOUS			
Equipment & PPE	Improper storage and maintenance of equipment	Probable	Catastrophic	HIGH	All equipment shall be inspected prior to each climb and annually at a minimum. Equipment shall be stored in a cool, dry, secure area to ensure integrity of equipment.	Improbable	Catastrophic	MEDIUM			
	Damaged or defective equipment	Remote	Catastrophic	SERIOUS	Equipment inspected prior to each use and annually at a minimum. Equipment shall be designated for tree climbing purposes only and not used for other work projects or purposes. Any damaged equipment shall be tagged and removed from service immediately. Any equipment that sustains the fall of an individual shall be tagged and removed from service.	Improbable	Catastrophic	MEDIUM			
	Improper treatment and care of equipment	Occasional	Catastrophic	HIGH	Employees shall be trained in the care of equipment when in use; not stepping on ropes, dropping equipment, etc.	Remote	Catastrophic	SERIOUS			
	Equipment beyond serviceable life	Occasional	Catastrophic	HIGH	Equipment shall only be used for the manufacturers recommended lifespan.	Improbable	Catastrophic	MEDIUM			
	Inadequate employee protection by PPE	Occasional	Catastrophic	HIGH	The following PPE is required for tree climbing: <ul style="list-style-type: none"> • ANSI certified climbing helmet • Long-sleeved shirt and pants (no shorts) • Eye protection • Gloves for rappelling • Climbing equipment as trained; ropes, harness, lanyards, carabiners, devices, etc. 	Improbable	Catastrophic	MEDIUM			
Climbing	Surprise hazard	Remote	Catastrophic	SERIOUS	All climbers must have a quick descent capability in case of an unforeseen hazard or emergency; ladder, rappelling equipment, etc.	Improbable	Catastrophic	MEDIUM			
	Injury from falling objects and / or pokes, abrasions, cuts, scrapes.	Occasional	Catastrophic	HIGH	Employees shall wear all required PPE as described in the equipment section of this RA	Improbable	Catastrophic	MEDIUM			
	Falling from tree	Remote	Catastrophic	SERIOUS	All tree climbing shall implement 3 points of contact at all times through use of climbing equipment, hands / arms / legs. When not climbing (working or resting in the tree), a lanyard around the tree attached to the harness shall be used. Employee shall use climbing equipment and techniques and methods as trained during certification for ascending and descending.	Improbable	Catastrophic	MEDIUM			

Injury from falling objects	Occasional	Catastrophic	HIGH	Ground personnel during climbing shall wear a hardhat and eye protection and shall not work directly under the tree. In order to work directly under the tree, the ground personnel must notify the climber to cease work and secure themselves to the tree before going under the tree. Items are not to be thrown from the tree nor ground personnel attempt to catch falling objects.	Improbable	Catastrophic	MEDIUM		
Inclement weather leading to increased risk of falling or compromised equipment	Occasional	Catastrophic	HIGH	Tree climbing shall only occur when conditions allow. Avoid precipitation or cold/freezing conditions when possible. Extra care must be taken if moisture is present. Climbing shall not be undertaken during thunderstorm conditions or approaching conditions or when winds exceed 25mph. No climbing during lightning events. Wet ropes are not as strong dry and are harder to handle.	Improbable	Catastrophic	MEDIUM		
Tree failure leading to fall	Occasional	Catastrophic	HIGH	All trees to be climbed shall receive a hazard assessment by the certified climber prior to climbing to ensure the tree is safe to climb.	Improbable	Catastrophic	MEDIUM		
Animals and other biological hazards	Remote	Catastrophic	SERIOUS	Animal presence and other biological concerns must be addressed during the tree hazard assessment. If an animal is encountered during climbing, work must cease until the hazard is mitigated.	Improbable	Catastrophic	MEDIUM		
Employee not fit for duty	Remote	Catastrophic	SERIOUS	Climbers and ground personnel shall be both physically and mentally fit for duty. Fatigued, stressed, or distracted employees shall not perform tree climbing operations. Employees shall maintain a professional work environment and shall not engage in horseplay during operations.	Improbable	Catastrophic	MEDIUM		
Inadequate employee fitness level for climbing	Remote	Catastrophic	SERIOUS	Employees must maintain fitness and agility; this is demonstrated during certification but must be maintained. Fellow climbers should help with assessment of preparedness.	Improbable	Catastrophic	MEDIUM		
Medical or other emergency stranding climber in tree	Improbable	Catastrophic	MEDIUM	Rescue equipment shall be on-site for all tree climbing projects. Employees are trained in equipment and procedures during certification.	Improbable	Catastrophic	MEDIUM		
Inadequate communications in case of emergency	Remote	Catastrophic	SERIOUS	A radio check-in (or other method such as cell phone) shall be completed to ensure adequate communication with local dispatch. Climbers should leave a map and specific location with dispatch personnel before heading to the field. Backup batteries shall be available for radio equipment.	Improbable	Catastrophic	MEDIUM		
Personal injury requiring first aid and / or CPR	Improbable	Catastrophic	MEDIUM	All climbers and ground personnel shall be current in First Aid / CPR training. An appropriate First Aid kit shall be immediately available.	Improbable	Catastrophic	MEDIUM		
Life threatening health concerns	Improbable	Catastrophic	MEDIUM	Employees who have a life-threatening health condition or severe allergy to bees shall have appropriate medications available (EpiPen, etc.). Ground personnel should be notified of any condition before climbing. Employees who may need to administer an EpiPen shall be trained in the procedure.	Improbable	Catastrophic	MEDIUM		
Prepared by					Date				
Line Officer Signature					Date				
Title									

