

U.S. Department of Agriculture Forest Service		1. WORK PROJECT/ACTIVITY <b>Trail Maintenance and Construction, Repair Work around Recreation Facilities.</b>	2. LOCATION <b>Zone Trails – Nogales, Sierra Vista and Douglas</b>	3. UNIT <b>0305 – Coronado National Fores</b>
<b>JOB HAZARD ANALYSIS (JHA)</b> References-FSH 6709.11 and -12 (Instructions on Reverse)		4. NAME OF ANALYST <b>Zac Ribbing</b>	5. JOB TITLE <b>Assistant Dispersed Recreation Manger</b>	6. DATE PREPARED <b>4/27/2010</b>
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE		
<b>Use of Hand Tools</b>	<p><b>Not using personal protective equipment,</b></p> <p><b>Inexperience worker, and Other personnel,</b></p> <p><b>None or limited knowledge of correct tool use,</b></p> <p><b>Carrying tools</b></p>	<p><b>Wear and use gloves, long pants and shirt, hard hat, eye protection, heavy leather workboots, hardhats, hearing protection. Use proper dust mask, special foot or shin/leg protection needed.</b></p> <p><b>Conduct a pre-work safety meetings. Always maintain your situational awarness. Basic safety: 1-Identify, communicate, and avoid hazards, both project related and environmental. When conditions significantly change, conduct an on-site safety session and adapt work tactics as necessary. 2- When changing routine work to specialized project conduct a new task specific safety and health tailgate session. Emphasize related risk, safe practices, and task need to accomplish assignments.</b></p> <p><b>Select the right tool for the work or a tool that is ergonomically designed for you. Obtain instructions on the tool’s design and purpose and how to safely use the tool. Use each tool only for the job it was designed for. Inspect and maintain tool before use, and inspect and maintain all tools periodically. Keep all tools in good working condition, and do not use tools that are in poor or unsafe condition. Never throw tools. Keep all tools clean and in working order. Protect them from corrosion damage. Wipe accumulated grease and dirt from tool. Lubricate moving or adjustable parts to prevent wear. Keep handles tight, secure them with wedges when necessary. Check wood handles for splitting, cracking, checking, and splivers. Do not use a tool with a damaged handle. When a tool is not in use guard all sharp edges and place in a predetermined location. Always ground tools away from others. Discard or repair damaged or abused tools promptly. Temporary or makeshift repairs are prohibited. When transporting tools to and from the worksite, always insure that edges are guarded. Establish a fifteen feet safety spacing when using tools. Never transport loose tools in the same compartment with employees unless the vehicle is equipped with a protective screen, safety net, or stationary toolbox.</b></p> <p><b>Carry tool with sheath on. Carry on downslope side of trail, head pointing forward, axe blade or pointy side down. Establish a ten feet safety spacing while carrying tools.</b></p>		

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(axe/hoe/pick)  
"Pulaski"

### Chopping and Grubbing

1) Always remove overhead branches or limbs, underbrush and debris that might interfere with chopping. 2) Do not allow people to stand in the chopping area, alert other workers of the distance chopped material might fly. 3) Protect all workers from flying debris by wearing PPE. 4) Always position your body securely when working with a tool. 5) Never chop cross handed, always use a natural striking action. 6) Be alert when working on hillsides or uneven ground. 7) Be especially watchful of spring loading, if cutting a sapling that is bound down. Be alert for sudden breakage. If there is no need to cut it, leave it. 8) Standing on a log to chop is not recommended. 9) Never use chopping tools as wedges or mauls. 10) Do not allow two people to chop together on the same tree. 11) When chopping limbs from a felled tree, stand on the opposite side of the tree from the limb being chopped and swing toward the top of the limb or branch. 12) Make sure tool is gripped firmly. Swing tool away from body or keep object between tool and body while swinging. 13) Do not allow the tool handle to drop below a plane that is parallel with the ground unless chopping on the opposite side of a tree from where your body is positioned. 14) If the cutting edge picks up a chip, stop, remove the chip then continue cutting. 15) To prevent glancing, keep the striking angle of the tool head almost perpendicular to the tree trunk.

Rake or Broom  
"McCloed"

### Raking or Sweeping

Carry tool with sheath on. Carry on downslope side of trail, head pointing forward, raker teeth pointing down. Make sure head is secure on shaft. Use proper PPE while working with tool. Establish safety spacing while carrying or using tool. Use tool for appropriate work. Make sure tool is gripped firmly.

Shovel

### Digging or Scraping

Never use a shovel as a prybar. When shoveling, support your lower back, and do not twist back through dirt. Avoid using lower back while working by not standing straight up. Scraping with a shovel support your upper body by bracing the forearm closest to your body against your thigh as you pivot the blade sideways.

Saw

### Hand and crosscut saw operation

1) Carry all saws with the sheaths on or folded if a folding saw, establish proper spacing and lookouts when sawing, keep body parts away from blades. 2) For crosscut saw, always inspect saw before use. 3) Use only properly set and sharpened saws. 4) Wear only cut resistant gloves when handling the saw, carefully sheath and unsheath saw with teeth pointed away from body. 5) Pick-up the saw with teeth away from your body. Rotate the teeth toward your body before handing it to another employee. 6) When attaching handles, keep the teeth away from your body and secure a firm grip on the saw. 7) Always assess the worksite 8) establish primary and secondary escape routes, safety zones and alternatives. 9) Prior to cutting, remove vegetation. Ensure firm, stable footing. 10) When using a two employee crosscut saw for bucking, ensure that any employee placed downhill is in a safe position. If it is not certain that the downhill partner is in a safe position, always single buck. 11) When using a two employee saw for falling,

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always predetermine who will remove the saw. 12) When beginning to cut, ensure that hands are in the proper position. Do not push saw. 13) Do not reach across a moving saw. 14) Maintain control and safe body position while sawing. 15)Keep in communication with your partner at all times about holding wood, binds, limbs, and knots that might affect safety. 16) When situations are deemed unsafe, use alternative methods or cancel the task. 17) Use wedges to prevent bind. 18) Use lever or peevee to relieve strain, lift with legs. 19) when inserting a blade in the bow-saw frame, keep your hands and fingers clear when tension lever snaps into or against the saw frame. 20) when removing a bow-saw blade ensure that the blade guard is in place. 21) do not push or force the saw. begin with light gentle strokes until the teeth begin to cut a kerf.

Wheelbarrow

Overloading, Pushing

Load wheel barrow to a manageable weight. Lift at the end of the handles using your legs. Alert others you are in motion and stand clear.

Lopping shears

Cutting to large a branch

Carry tool with head pointing forward on the downslope side of trail while gripping both handles. Keep body parts away from cutting blade. Do not cut oversized branches. Stand away from falling debris. Carry debris with sharp ends away from body and in such a way that vision is not impaired.

Rock bar

Tool weight and fatigue. Prying, Busting rock, Rolling rocks, Tamping.

Secure fulcrums (pivot point) and toeholds. When prying, push with your palms. When applying leverage keep your feet and other parts of your body out of line with the bar. When breaking, chipping, prying or working on rock or other materials, ensure that people are not within striking distance of bar or flying chips or material. Carry bar at balance point and on the downhill side. Lay the bar flat and in the clear when not in use. Store bars so they do not present a tripping, falling, or rolling hazard.

Chainsaw use

Inexperience, no formal training,

Obtain formal saw training. Check saw over before starting. be sure all parts are there and functional. Check chain tension, bar nuts and cover plate, make sure throttle works correctly, check chain brake, insure proper bar oil level (about even with gas level) always fill bar oil first.

1) PPE will always be worn when using powered saws, this includes non-skid laced boots at least 8 inches tall, chaps, longleave pants, appropriate gloves, longleave shirt, eye protection, ear protection, hardhat. 2) carry the saw in such a way as to avoid contact with chain, muffler, spark arrester or dogs 3) point the saw bar forward when walking downhill with the saw at your side. 4) point the bar behind you when walking uphill. with the saw by your side. 5) when carrying the saw on your shoulder be aware of dogs, chain and muffler. wear gloves and use an approved chainsheath or barguard. use a shoulderpad to lessen fatigue. 6) get used to using the chain brake when moving from work environment to another work environment . 7) shut saw off when transporting it. 8) maintain a secure grip on the saw at all times. 9) always start the saw with the chain brake engaged. 10) start the saw on the ground or otherwise firmly supported. 11) Never pull start the saw with one hand.

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Use of powered equipment (grinders, weed eaters, blowers, pionjar, powered hoist, etc..)

Cuts, blisters, slivers, debris in eyes, dust, blunt force traumas, mangleage of extremities, broken bones, avulsions to the dermal layer, contusions, abrasions and lacerations burns, electrical and chemical burns

Wear gloves, long sleeve shirts, ear plugs, safety glasses, hardhat/helmet, respiratory protection, work boots. Thorough training in the use of all power equipment. 1) Permit only authorized/trained personal to operate equipment. 2) select the correct tol for project 3) use each tool only for the job it is designed to do 4) use cord connected powered oprating tools in accordance with manufacturers operating, safety and maintenance instructions 5) when possible, select ergonomically designed tools that may lower fatigue and lesson the risk of accident or injury. 6)safety inspect and maintain power tools on a regular basis. 7) replace or repair worn or damaged tools, equipment, and cords immediatly. Temporary and makeshift repairs are prohibited. 8) tag all tools in need of repair with a "do not use" tag and provide suitable storage bins for tools needing repair or maintenance. 9) check power cords frequently for cracks, cuts, abrasions, and broken insulation. 10) keep power cords clean and free of kinks. never carry a portable power tool by the cord. 11) provide electric tools with a grounding connection or provide double insulated tools.

MAINTENENCE: 1) do not alter or nullify manufacturers guards and safety equipment on power tools unless the manufacturer identifies specific uses. 2) inspect, maintain and adjust all guards and safety equipment based on manufacturers specifications or otherwise at regular intervals. 3) Never allow overconfidence to lead you into unnecessary risks. 4) keep the work area clean, well lit, and dry. Good housekeeping is essential to good workmanship. 5) do not wear clothing or jewelry that could become entangled in power tools, long hair should be tied back and tucked under a hat or collar when working near power tools.

Wench, come-alongs

Inexperience, under sized for the task, cable whiplash,

Learn how to use equipment and what type of wench is required for the task. Do not stand inline with the cable. Wear eye protection. It is a good idea to lay a heavy cloth object on the cable when moving an object encase the cable snaps. The cloth helps to the intensity of the cable whiplashing effects.

Required PPE and personal gear

Unprepared for the unexpected, sunburn, dehydration/exposure,

Wear standard trail crew gear and PPE, gloves, long pants, work boots, long sleeve shirts, ear protection (where applicable), eye protection, sunglasses, sunscreen, hat, carry raingear, tuck pants in legs or wear gators. The following is a list of items required for backcountry work/travel per H.S.C.H. 1) First aid kit, 2) map and compass, 3) matches or lighter or firestarter in weather proof container, 4)water or purifier, 5) food, 6) flashlight with spare batteries, 7)radio and spare batteries 8) eye protection and sunscreen, 9) lighthweight shelter and appropriate clothing for climatic conditions, 10) knife or multi-tool, 11) whistle and signal mirror, 12) GPS unit. Pack plenty of drinking water, food, medicine, personal hygiene requirements, sun protection, insect repellent, extra clothing, etc., to survive for 24 hours beyond your planned return time.

<p><b>Trail Maintenance and Construction, Repair Work around Recreation Facilities.con't.</b></p> <p><b>Recreation site rehabilitation work, ( lifting, pushing, bending, walking )</b></p> <p><b>Traveling/Hiking in remote/rugged areas and/or over long distances</b></p>	<p><b>Falls, strains, sprains, broken bones, pulled muscles, pinches, abrasions, lacerations, blunt force trauma, insect stings/bites, punctures,</b></p> <p><b>unprepared, becoming lost, improper foot wear, lack of communication,</b></p>	<p><b>Always lift and carry heavy debris/material within your capabilities or get help. Roll, push, or flip large objects instead of lifting, if you must lift, use leg muscles not your back. Wear required PPE. Never work or travel alone without discussing your work plan, communication plan, and evacuation plan with co-workers. Beware of insects, snakes, weaken trees, loose rocks, and other animal or natural hazards.</b></p> <p><b>Personnel should try to follow designated trails and have an accurate topographical map of the area they are hiking and working in. All crew members will travel together. All crewmembers will carry adequate water for the hike and expected weather. Crew supervisor and, if possible, crew members will carry handheld radios for communication. Crew supervisor will report to dispatch in the morning and evening on the crew's status. The crew will clear existing/designated helispots near worksites to facilitate a medivac if needed. Proper footwear ( 8" high, leather hiking boots ) will be worn. In the event the crew becomes lost they will go back the way they came, or go to the nearest high point were they can achieve clear radio communications to activate the need for assistance and stay put until help arrives.</b></p>
<p>10. LINE OFFICER SIGNATURE</p>	<p>11. TITLE</p>	<p>12. DATE</p>

Previous edition is obsolete

(over)

