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| **U.S. Department of Agriculture** | **1. WORK PROJECT/ACTIVITY** | **2. LOCATION** | **3. UNIT** |
| **Forest Service** | Trail Maintenance | Pacific Crest NST |  |
| **JOB HAZARD ANALYSIS (JHA)** | **4. NAME OF ANALYST** | **5. JOB TITLE** | **6. DATE PREPARED** |
| References-FSH 6709.11 and -12  (Instructions on Reverse) |  |  |  |
| **7. TASKS/PROCEDURES** | **8. HAZARDS** | **9. ABATEMENT ACTIONS**  **Engineering Controls \* Substitution \* Administrative Controls \* PPE** | |
| Personal Protective Equipment |  | Helmet, work gloves, boots with slip-resistant heels and soles with firm, flexible support; Eye protection; Any prescription safety glasses must have side shields; Long sleeve shirt; Long pants; hearing protection if working with chainsaw; First aid kit | |
| Vehicle Operation | Fatigue  Narrow, rough roads  Poor visibility  Mechanical failure  Weather | Drive defensively and slowly; Always wear seatbels and turn lights on; Ensure that you have reliable communication; Obey Forest road speed limits; Use spotter when backing; Carry and use chock blocks, use parking brake, and do not leave vehicle while it is running; Inform someone of your destination and estimated time of return; Call in if plans change; Carry extra food, water, and clothing; Stop and rest if fatigued; Refer to pages 20-72 in the H&SC handbook. | |
|  | Getting Lost | Use map if possible; Drivers should know where the destination point is; Maintain visual contact with another vehicle; | |
| Hiking on the Trail | Dehydration  Contaminated Water | Drink 12 – 15 quarts of water per day when the temperature is above 80 degrees. Increase fluids on hottor days or during extremely strenuous activity. Drink water from a municipal source; If none available, use proper filtering techniques; Boil water for 3-5 minutes, treat it with iodine tablets, or use an approved water filtration pump. Observe team members for signs of dehydration; Review map or ask crew leader about water sources, keeping in mind the seasonality of the water source | |
|  | Falling objects  Snags  Trail hazards  Carrying tools | Be aware of your surroundings and watch where you step. Look for widow makers and snags; Be aware of water crossings, marshes, and altitude changes; When fording streams, use a walking stick and undo hip belt to avoid drowning; Maintain a safe walking distance between people (10 feet minimumu); Always have sheaths on tools and carry them on the downhill side of the trail; The person carrying the crosscut saw, rock bar, or pole saw should walk last; | |
|  | Weather | Be familiar with weather forecasts; Take appropriate gear; You can experience rain, hail, snow, lightning, or extreme heat on the PCT; Be watchful throughout the day of changing weather; | |

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|  | Getting Lost | Identify safe routes and local conditions; Hike in a group; Make sure visual contact is kept at forks in the trail; If one has to depart from the trail, advise the crew; Avoid hiking in the dark; Designate meeting spot should someone become separated |
|  | Foot Damage | Wear appropriate hiking boots and socks taking into account the terrain, the work, and the weather; Communicate before moving heavy objects; Use cornstarch as a drying agent on blisters. |
|  | Sun Exposure | Wear protective clothing including long sleeve shirt, long pants, full brimmed hat/helmet; Use sun block and lip balm; |
|  | Heavy Brush | Wear protective clothing such as long sleeve shirt, long pants, helmet, work gloves, and protective eye wear; Watch for others when discarding brush; Throw brush out of sight from the trail; In heavy undergrowth, lift knees high to clear obstacles. |
| Working on the Trail | Animals | Be observant of snakes which like to live under logs and shady areas; |
|  | Insects | Use insect repellant; Be aware of hives in brush or hollow logs; Clothing should fit tight at the wrists, ankles and waist; Tuck in shirt tails; Search your body, especially hair and clothing, for ticks and insects on a regular basis; Bathe and/or change clothes after each work day; |
|  | Contact with Ticks, Spiders, Mosquitoes, Bes, and Poison Oak/Oak/Sumac | Identify crewmembers that are allergic and keep them out of work locations where poisonous plants are present. Educate crewmembers on plant ID. Whenever the skin contacts a poisonous plant or noxious weed, wash the area with cold water within 1 to 3 minutes or as soon as possible. While working in the poisonous plant environment, do not use soap and/or hot water because they can remove the natural protective oils from your skin. Upon returnining from the field, use rubbing alcohol to cleanse contacted skin. Wear gloves when pulling weeds. |
|  | Hikers | Inform the others when you see hikers on the trail; Work stops until the hikers clear the work area; If a potential hazard exists, crew members can stand watch at safe distances and stop hikers until the hazard is cleared; Ensure hikers have a clear path; Place tools off the trail in a centralized location; Keep shields on sharp edges when tool is not in use; Communicate a clear path to the hikers; |
|  | Stock | Inform everyone when stock approaches; Work stops until the stock has passed the work site; Stand off the trail on the downhill side; Place tools a safe distance away from the trail; Do not make sudden movements or loud noises; It may be helpful to take your hard hat off until animals pass; Listen and look for approaching stock; Remain calm and back away if animals become unruly; |
|  | Sharp Tools | Carry tools safely as instructed by crew leader; Carry tools on the downhill side; Carry sharpened edge of tool downward away from your body; Be aware of others around you; Do not carry tools on your shoulder except rock bar pole saw or crosscut saw; Space yourselves when hiking; |
|  | Back Injury | Use proper lifting techniques when picking up items; Bend knees, not back; Lift straight; Stretch periodically; Work with a partner; Hydrate; |
|  | Tool Use | Properly maintain and care for tools; Carry tool with scabbard on; Look around for others and hazards before swinging tools; Have firm footing and be balanced when swinging; Never throw a tool; When not in use, shield any sharp edges; Limb and peel logs on the opposite side of you; Keep tools sharp; Wear gloves and hard hat; Move large rocks by hand or with a lever or bar versus hitting with a tool; Maintain tight grip on tool handles; Use gentle but deliberate hoeing action; Be aware of others working around you; Do not use tools with a loose handle; Avoid working in the dark; |
|  | Hand and Foot Damage | Communicate when moving large or heavy objects; Do not roll anything heavy when people are downhill; Anticipate the roll of any loose object; watch for limb and stubs on rolling trees; |
|  | Overhead hazards | Be watchful of loose limbs on trees; Be careful of dead trees;  Avoid working at an unsafe site; |
| Communication | Phones | Do cellular phones work; If available, do satellite phones work |
|  | Radios | Have agency compatable radios on crew; Ensure radios have properly programmed frequencies, in working order, and has an extra set of batteries before leaving on the trip; Knowledge of usable repeaters and best locations to use radios during emergency. |
|  | Check-in/Check-out | Check-in before project and check-out after project with PCTA Regional Representative and/or Federal Agency Staff person |
| Emergency Response | Emergency Response Plan | Ensure Emergency Response Plan (ERP) is in place prior to beginning of project; share copy with PCTA Regional Rep |
|  |  | As soon as ERP is activated contact PCTA and Federal Agency Staff person immediately |
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| **10. LINE OFFICER SIGNATURE** | **11. TITLE** | **12. DATE** | | | | |
| **JHA Instructions (References-FSH 6709.11 and .12)**  The JHA shall identify the location of the work project or activity, the name of employee(s) involved in the process, the date(s) of acknowledgment, and the name of the appropriate line officer approving the JHA. The line officer acknowledges that employees have read and understand the contents, have received the required training, and are qualified to perform the work project or activity.  Blocks 1, 2, 3, 4, 5, and 6: Self-explanatory.  Block 7: Identify all tasks and procedures associated with the work project or activity that have potential to cause injury or illness to personnel and damage to property or material. Include emergency evacuation procedures (EEP).  Block 8: Identify all known or suspect hazards associated with each respective task/procedure listed in block 7. For example:  a. Research past accidents/incidents.  b. Research the Health and Safety Code, FSH 6709.11 or other appropriate literature.  c. Discuss the work project/activity with participants.  d. Observe the work project/activity.  e. A combination of the above. | | **Emergency Evacuation Instructions (Reference FSH 6709.11)**  Work supervisors and crew members are responsible for developing and discussing field emergency evacuation procedures (EEP) and alternatives in the event a person(s) becomes seriously ill or injured at the worksite.  Be prepared to provide the following information:  a. Nature of the accident or injury (avoid using victim's name).  b. Type of assistance needed, if any (ground, air, or water evacuation).  c. Location of accident or injury, best access route into the worksite (road name/number),  identifiable ground/air landmarks.  d. Radio frequencies.  e. Contact person.  f. Local hazards to ground vehicles or aviation.  g. Weather conditions (wind speed & direction, visibility, temperature).  h. Topography.  i. Number of individuals to be transported.  j. Estimated weight of individuals for air/water evacuation.  The items listed above serve only as guidelines for the development of emergency evacuation procedures.  JHA and Emergency Evacuation Procedures Acknowledgment | | | | |
| Block 9: Identify appropriate actions to reduce or eliminate the hazards identified in block 8. Abatement measures listed below are in the order of the preferred abatement method: | | We, the undersigned work leader and crew members, acknowledge participation in the development of this JHA (as applicable) and accompanying emergency evacuation procedures. We have thoroughly discussed and understand the provisions of each of these documents: | | | | |
| a. Engineering Controls (the most desirable method of abatement). | |  |  |  |  |  |
| For example, ergonomically designed tools, equipment, and | |  | SIGNATURE DATE |  | SIGNATURE DATE |  |
| furniture. | |  |  |  |  |  |
| b. Substitution. For example, switching to high flash point, non-toxic solvents. | |  |  |  |  |  |
| Work Leader  c. Administrative Controls. For example, limiting exposure by reducing the work schedule; establishing appropriate procedures and practices. | |  |  |  |  |  |
| d. PPE (least desirable method of abatement). For example, using hearing  protection when working with or close to portable machines | |  |  |  |  |  |
| (chain saws, rock drills, and portable water pumps). | |  |  |  |  |  |
| e. A combination of the above. | |  |  |  |  |  |
| Block 10: The JHA must be reviewed and approved by a line officer. Attach a copy of the JHA as justification for purchase orders when procuring PPE.  Blocks 11 and 12: Self-explanatory. | |  |  |  |  |  |