

Agency:	1. WORK PROJECT/ACTIVITY	2. LOCATION	3. UNIT
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	
<u>Task that apply to ALL Projects:</u>			
<u>PERSONAL SAFETY (includes working in pairs and in crew situations)</u>			
Working in Inclimate Weather Conditions	Falls, slips, strains, and sprains	A. Proper PPE including dressing for current and changing climates, have proper footwear for task, work boots	
(see Heat Stress and Wind Chill Index attached to this JHA)	Heat Exhaustion, heat stroke, frost bite, and hypothermia	B. Drink plenty of water and eat a proper diet.	
	High Winds in Project Area	C. Be aware of possible hazards in your area, widow makers, snags, burnt trees, etc.	
	Raining, snowing, and lightning storms	D. Seek shelter when the lightening cells are directly overhead. Whenever possible, return to your vehicle and wait out lightning storm. When unable to get to vehicle, get as low to the ground as possible, stay away from unsheltered exposed areas (ridges, rock outcrops) and tall trees. DO NOT use any electrical equipment.	
		E. Dress in layers.	
Awareness	Making mistakes that may lead to accident or injury	A. Listen to any unsure or uneasy feelings about a situation. Slow down and remain focused on the task at hand. Have good Situational Awareness, avoid day dreaming or falling into “routine” attitude, remember to think about safety hazards and let your co-workers know about potential hazards you observe. Attend morning and evening briefings and have the most up –to-date IAP.	
		B. Step Back, Think, Organize, and Proceed.	

Human confrontation	Angry or violent individuals	A. If a person approaches you and looks angry or threatening, don't feel obligated to speak with the person. If you are uncomfortable for any reason with the situation, <u>leave the area</u> and contact your supervisor, or dispatch. (if you need to, make up an excuse to leave, i.e.... you need to respond to a reported fire). If you are uncomfortable with the situation, you can use your radio to alert Dispatch advise them you are in contact with an individual who is upset and ask for 5 minute check backs until you are "code 4". Even if you are in an area where you cannot transmit, you can give the impression that you are in radio contact.
		B. Try to be intentional in your actions, you may feel intimidated, but act in control.
		C. Keep cool. If the person you are speaking to is angry listen - don't react.
		D. Refer those who disagree with the FS policy to your supervisor.
		E. Never get into a private vehicle. If you are stranded, radio for help, stay in your rig until help arrives.
		F. Most people you interact with are not a threat, even though they may be upset about what you're doing or about Forest Service policy. Pay attention to your intuition, if the situation seems wrong, remove yourself from it and get help from your supervisor or Law Enforcement.
Daily Check in/Check out	Individual locations unknown in emergency situations	A. Notify supervisor of daily plans and locations via verbal, phone, or radio communication by "checking in and out".
		B. Check out when one leaves the office and check in upon return.
		C. Supervisors need to make sure all employees are accounted for at the end of the day.
Avoiding/Treating Tick Bites	Lyme diseases, Rocky Mountain Spotted Fever, etc.	A. Spray clothing with insect repellent as a barrier.
		B. Wear light colored clothing that fits tightly at the wrists, ankles, and waist.
		C. Each outer garment should overlap the one above it.
		D. Cover trouser legs with high socks or boots.
		E. Tuck in shirts.
		F. Search the body on a regular basis, especially hair and clothing, ticks generally do not attach during the first couple of hours.
		G. If a tick becomes attached, pull it by grasping it as close as possible to the point of attachment and pull straight out with gentle pressure. Wash skin with soap and water, then cleanse with rubbing alcohol. Place tick in an empty container for later identification. Record dates of exposure and removal.
		H. Do not try and remove the tick by burning with a match or covering it with a chemical agent.
		I. If you cannot remove the tick or the head detaches, seek medical help immediately.

Avoiding/treating bee stings	Allergic reaction, painful stings.	A. Be alert to hives in brush or hollow logs. Watch for insects traveling in and out of one location.
		B. If you or anyone you are working with is known to have allergic reactions to bee stings, tell the rest of the crew and your supervisor. Make sure you carry emergency medication with you at all times.
		C. Wear long sleeve shirts and trousers; tuck in shirt. Bright colors and metal objects may attract bees.
		D. If you are stung, cold compresses may bring relief.
		E. If a stinger is left behind, scrape it off the skin. Do not use a tweezers as this squeezes the venom sack, worsening the injury.
		F. If the victim develops hives, asthmatic breathing, tissue swelling, or a drop in blood pressure, seek medical help immediately. Give victim antihistamine, (Benadryl, chlo-amine tabs).
Avoiding/treating mosquito bites.	Skin irritation, encephalitis	A. Wear long sleeves and trousers.
		B. Avoid heavy scents.
		C. Use insect repellants. If using DEET, do not apply directly to skin, apply to clothing only.
		D. Carry after-bite medication to reduce skin irritation.
<u>WALKING IN THE WOODS</u>		
Working around treatment units	Direct exposure to mulch	A. Do not work within areas directly in the application flight path of aerial equipment. Pilots will have to divert their drop if staff are in danger of being hit by mulch or you may inadvertently be directly exposed to mulch if pilot does not see you prior to dropping their load
	Falling limbs, bark, widow makers	A. Be aware of areas with widow makers and potential snags. Be aware of your surroundings. Aerial mulch will be delivered at approximately 100 miles per hour and may cause limb, bark, and tree top loss on trees weakened by the fire when impacted by falling mulch. If you are close to the drops, ensure you are in a safe location away from the main swath being treated. Only enter the treatment areas for inspection after the drops have been completed and you are cleared to do so.
		B. If accidentally caught in the path of an on-coming drop, find shelter behind a rock outcrop or solid tree. If none are available, face the drop, lie flat on the ground with hard hat on, cover and protect face and airway. If you have hand tools or instruments in your hands, place them on the downhill side of you prior to the drop. Mulch will flow downhill on steeper slopes and could move tools, etc. so be sure they are down hill and a safe distance away from you.

	Communication and awareness	A. A radio frequency has been established for air to ground communications. Pilots have the ability to speak with you during treatments. Be aware pilots will be monitoring company radio channel (allowing pilots to talk with each other), and civilian radio channels. Monitor your air-to-ground frequency and if contacted by pilot respond and provide logistical information as requested (your location, mulch coverage, etc.) Do not attempt to contact pilot during final approach for a mulch drop
		B. For all other communications, monitor tactical radio channel and request assistance or additional information as needed from Team Leaders or COR. Information can be passed onto pilots through COR.
Working on steep hillsides	Sprains and strains (twisted ankles)	A. Wear Hiking Boots with Slip Resistant Soles and an 8 inch high Ankle Support.
		B. Navigate your travel route, Looking UP, Down, and All Around. Avoid crawling over logs, stumps, and rocks.
		C. Work and Walk Across Slope. Avoid loose roots, etc.
	Falling debris	A. Be aware of others working below you.
		B. Communicate with other crewmembers, especially if a rock or large objects becomes loose and starts to roll.
		C. Stage a crewmember to assist with traffic control if there is a potential for objects to roll into the street.
DRIVING		
Traveling on official business	Stress and fatigue	A. Follow established work/rest guidelines. Maximum of 10 hours driving in a 16 hours shift, no driving after 10 pm. When driving, stop for a break at least every 2 hours.
Driving	Pike National Forest and Regional Policy	A. While driving a government vehicle (both marked vehicles and rentals) all occupants MUST HAVE <u>seat belts</u> on while vehicle is moving AND <u>headlights</u> must be on at all times the vehicle is moving. NO <u>cell phone</u> use while driving! NO eating while driving, NO smoking in vehicles.
	Type of vehicle, training	A. Select appropriate vehicle for work needs and location. Familiarize yourself with the vehicle and know where the controls are. Make the "circle of safety" check of vehicle condition. Review maps and plan route prior to beginning your trip. Take a 4-hour Defensive Driving refresher at least every 3 years. Report any accident (Gov. leased or pov), regardless of dollar amount.
	Weather conditions	A. Changes in climatic conditions require adjusting to different weather situations. Do not drive in adverse weather conditions if the trip can be delayed. Avoid being rushed; you will need more time to prepare the vehicle and get to your destination. Remove all frost and snow prior to starting your trip. Make sure vents are clear of snow to provide adequate airflow for defrosting.

Field work driving	Off highway driving	A. Check with local unit or District as necessary prior to driving on mountain roads regarding logging traffic, and other items such as construction, washouts, blow downs and closures. Proceed slowly around corners and drive on the right side. Be able to stop within 1/2 of viewing distance.
Driving qualifications	Skills	A. Drivers must have a valid state driver's license that meets the requirements for the equipment operated during official business. Supervisors shall review employees on a 4-year basis who drive light vehicles. Review shall be done on form R1-FS-7130-1. Any employees who are CDL certified shall have a review annually. Full time operators, operators of specialized equipment (examples- forklifts, trailer towing, ATVs, snowmobiles) and operators of vehicles over 10,000 GVWR shall have a government identification card with appropriate endorsements for equipment being operated. Defensive Driving Training is required every 3 years. ONLY FS EMPLOYEES MAY DRIVE GOVERNMENT VEHICLES.
Driving to and from the work site	Vehicle conditions	A. Perform pre-trip inspections on vehicles. Conduct scheduled PM Inspections
	Weather	A. Be aware of other drivers who appear to be unprepared for conditions, driving too fast and/or appear to be pre-occupied (cell phones, sightseeing, etc...)
	Road conditions, and construction	A. Always wear your seat belt. Slow down when roads are wet or icy. Allow for more stopping distance and drive defensively.
	Other drivers and animals	A. To Prevent Accidents, make concessions to other drivers who are thoughtless, unskilled, or ignorant of the hazards they are creating.
	Backing vehicles and parking	A. Always use a backer to serve as a guide
		B. Use chalk blocks and establish a safety cone zone around your vehicles when you are working along busy roadsides.
Travel, check-out, check-in	Personal safety	A. When in travel status, leave an itinerary with your supervisor. Include destination, departure and return times and as appropriate a contact where your family or supervisor can reach you in case of an emergency.
		B. There are certain situations when no one is expecting the employee to arrive on a specific schedule. When appropriate the employee should call back into the office to let folks know that the trip was completed as planned.
<u>WORKING ALONG THE ROADSIDE</u>		
Working along the roadside in neighborhoods.	Watch out for vehicle traffic	A. Proper PPE including safety cones and signs, lime green vests, hard hats, safety glasses, <u>vehicle hazard and warning lights</u> in use when necessary.
	Trees, logs, and other hazards that may fall into the roadway.	A. Establish your safety cone zone. All work should be done within the safety cone zone, workers should never be outside the safety cone zone. Cone zone should be placed in a manner that does not obstruct traffic on the road.

	Impending vehicles, pedestrians, and cyclists	A. "Crew Working Ahead" signs or cones should be placed 75 feet from the work area for oncoming traffic to see. B. Make sure traffic can safely get around work area.
		C. If traffic control is necessary to temporarily hold vehicles or direct traffic during project operations, road work/flag person or tree felling ahead signs should be in place. Traffic control should be done with workers who have appropriate reflective vests, appropriate slow/stop signs and radio communications. On low traffic residential side streets and on Forest System roads, vehicles, signs and at least one person should be on the road controlling traffic. On roads with tight turns, or blind corners, two traffic control persons are required. In addition, in the event that traffic control is needed on high traffic/high speed roadways (main residential streets, highways, etc.); the appropriate CDOT office should be notified and used when possible for traffic control.
		D. Greet pedestrians/cyclists before they enter the project/work area to make them aware of the hazards and advise an alternative route.
		E. Be aware of language (working in a public area, be professional, you represent the Forest Service). Be aware of restroom availability.
<u>PERSONAL PROTECTIVE EQUIPMENT (PPE)</u>	Personal injury	A. It is each employee's personal responsibility to wear the appropriate PPE for the job they are doing. It is the supervisor's responsibility to insure that their employees have the proper PPE for the job they are doing and that they are using and wearing it properly.
<u>Personnel Working at the Air Base</u>		
	Air craft fire	A. In the event of an aircraft or fuel fire: Notify the fire department (911) and the airbase supervisor. The airbase supervisor will oversee the evacuation of all Forest Service, visitors and, helibase personnel, to safe areas.
	Air craft crash	A. (1) The airport supervisor will notify crash rescue, via 911. (2) Off airbase first on scene will call 911. Due to the lack of appropriate training, Forest Service personnel will, in no event, conduct direct crash/rescue efforts but could assist in first aid efforts.
	Strong propwash can contain small rocks, engine oil droplets, hot exhaust gases and strong gusts.	A. Avoid propwash whenever possible and restrict nonessential personnel from area entry. PPE for propwash exposure is eye protection and hardhats with chin straps.
	Damaging and disruptive noise.	B. PPE includes ear protection. Minimize the amount of time around loud noises.

<p style="text-align: center;">JHA Instructions (References-FSH 6709.11 and .12)</p> <p>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.</p> <p>Blocks 1, 2, 3, 4, 5, and 6: Self-explanatory.</p> <p>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).</p> <p>Block 8: Identify all known or suspect hazards associated with each respective task/procedure listed in block 7. For example:</p> <ul style="list-style-type: none"> 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. <p>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:</p>	<p style="text-align: center;">Emergency Evacuation Instructions (Reference FSH 6709.11)</p> <p>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.</p> <p>Be prepared to provide the following information:</p> <ul style="list-style-type: none"> 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. <p>The items listed above serve only as guidelines for the development of emergency evacuation procedures.</p> <p style="text-align: center;">JHA and Emergency Evacuation Procedures Acknowledgment</p> <p>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:</p>						
<p>a. Engineering Controls (the most desirable method of abatement).</p> <p>For example, ergonomically designed tools, equipment, and furniture.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"></td> <td style="width:50%;"></td> </tr> <tr> <td style="text-align: center;">SIGNATURE</td> <td style="text-align: center;">DATE</td> </tr> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </table>			SIGNATURE	DATE		
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<p>b. Substitution. For example, switching to high flash point, non-toxic solvents.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"></td> <td style="width:50%;"></td> </tr> <tr> <td style="text-align: center;">SIGNATURE</td> <td style="text-align: center;">DATE</td> </tr> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </table>			SIGNATURE	DATE		
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<p>c. Administrative Controls. For example, limiting exposure by reducing the work schedule; establishing appropriate procedures and practices.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"></td> <td style="width:50%;"></td> </tr> <tr> <td style="text-align: center;">SIGNATURE</td> <td style="text-align: center;">DATE</td> </tr> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </table>			SIGNATURE	DATE		
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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.				

Evacuation Plan

- ⌘ Discuss and Develop pre-emergency plans based on the site's hazards.
- ⌘ If personnel are injured on the jobsite determine if moving the patient is absolutely necessary.
- ⌘ When there is a need to evacuate the site, mitigate all injuries as the scene safety allows.
- ⌘ If a utility is struck or electric line is down evacuate the scene at least 50 feet away.
- ⌘ Do not start up any motorized vehicles, power equipment, or anything that could ignite a spark.
- ⌘ Call Dispatch via radio or phone # _____.
 - Identify who you are and that you have emergency traffic.
 - Nature of Accident or Injury (Avoiding using victim's name.)
 - Type of assistance needed. (Ambulance, Fire Truck, etc.)
 - Give Dispatch the scene's location (street address, city, and state) and best travel route.
 - Provide them with all necessary information – Radio Channel
 - Contact Person
 - Local Hazards
 - Weather Conditions
 - Topography
 - Number of Individuals that need to be transported.
 - Estimated weight of each individual.

- ⌘ Wait on scene for emergency personnel to arrive or tell Camino that you are transporting the patient via crew rigs to the nearest hospital/urgent care if the injuries permit it.
- ⌘ Call the Supervisor to inform them of the situation as soon as you are able too.
- ⌘ Be aware of Local Resources

- ⌘ Follow all Evacuation Plans for Offices and Workstations.

HEAT STRESS INDEX																
	Actual Thermometer Reading (F°)															
	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104
RELATIVE HUMIDITY	HUMIDITURE F° (Equivalent Temperature)															
10%	68	70	72	75	77	78	80	82	85	87	89	91	93	95	97	98
20%	70	72	75	77	79	81	84	86	88	90	93	95	97	99	101	104
30%	73	75	77	78	80	83	85	87	90	92	95	98	101	105	108	110
40%	74	76	78	79	81	85	87	89	92	96	100	104	106	110	117	120
50%	75	77	79	81	84	86	90	93	96	100	105	108	110	120	125	132
60%	75	77	80	83	86	89	92	95	100	106	111	120	125	132		
70%	75	77	81	85	89	91	96	100	106	115	122	128				
80%	76	78	83	86	91	95	100	106	114	122						
90%	77	79	85	89	95	99	109	115	122							
HUMIDITURE F°	Below 80		80 - 90		90 - 105		105 - 130			Above 130						
DANGER CATEGORY	NONE		CAUTION		EXTREME CAUTION		DANGER			EXTREME DANGER						
NONE	Little or no danger under normal circumstances.															
CAUTION	Fatigue possible, if exposure is prolonged and there is physical activity.															
EXTREME CAUTION	Heat cramps and heat exhaustion, if exposure is prolonged and there is physical activity.															
DANGER	Heat cramps or exhaustion likely; heat stroke possible, if prolonged and there is physical activity.															
EXTREME DANGER	HEAT STROKE IMMINENT!															

NOTE: Add 10° F when protective clothing is worn and add 10° F when in direct sunlight.

WIND CHILL INDEX												
	Actual Thermometer Reading (F°)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
Wind Speed (mph)	Equivalent Temperature (F°)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-21	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-124
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-49	-67	-82	-98	-118	-129	-145
40	26	10	-5	-21	-37	-53	-69	-85	-100	-116	-132	-148
	LITTLE DANGER (for properly clothed person)				INCREASED DANGER				GREAT DANGER			
	DANGER OF FREEZING EXPOSED SKIN											

NOTE: Wind speeds greater than 40 mph have little additional effect.

FIELD MEDICAL EVACUATION PLAN
Lake Tahoe Basin Management Unit

Project Name:		Forest:		District:	
Date:		Incident Number:		Plan Prepared By:	
<p>Qualified First Responders or the most senior qualified medical provider will provide patient assessment and first aid. Evacuation of serious injuries will be coordinated with Dispatch. Minor injuries will be treated, and transported by vehicle to a medical facility as necessary.</p>					
Contact					
Contact:		Phone Number:			
Frequency	Rx:		Tx:	Tone:	
Alternate Contact:		Phone Number:			
Injury Information					
Nature of Injury: Avoid using names					
Number to Transport:		Estimated Weights:			
Project Location					
Legal:		Latitude:		Longitude:	
Narrative: including major landmarks or cross roads					
Hazards: To ground or aviation resources		Weather Conditions: Wind speed and direction, visibility, temperature			
Closest Helispot Location					
Legal:		Latitude:		Longitude:	
Narrative: including major landmarks or cross roads					
Medical Facility					
Nearest Facility:		Phone Number:			
Travel Time:		Address:			
Directions:					
24-Hour Facility:		Phone Number:			
Travel Time:		Address:			
Directions:					