


U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Horseback/Trail Maintenance	2. LOCATION Tonto National Forest	3. UNIT Mesa Ranger District
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Kelly Finley	5. JOB TITLE Recreation Staff Assistant	6. DATE PREPARED 12/12/2019
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
Livestock Handling	Animals that display dangerous characteristics, such as uncontrollable bucking, shall not be accepted for service.	<ul style="list-style-type: none"> If dangerous habitats are discovered, remove animal from service. Select appropriate livestock for the specific work project or activity. Supervisors shall ensure that personnel assigned to break, train, and ride pack/saddle livestock are competent in these tasks. District Stock Managers are responsible for certifying employees as to their abilities as outlined in the Forest Stock Plan. 	
Leading Animals	Animals spooking at something, stepping on you, kicking, striking, running off, running over you.	<ul style="list-style-type: none"> Train animal to keep out of your space by placing hand just under snap attached to halter and turning head so that hips move away from you. If necessary let go of lead rope and get out of the way if you cannot safely control animal. Do not wrap lead rope around your hand or any other part of your body or saddle horn. Use lead rope approximately 10 feet in length with smooth braid at the free end and no knots or loops. 	
Securing livestock	Animal spooking, setting back and breaking halter, lead rope or rail.	<ul style="list-style-type: none"> Do not use bridle or reins to tie livestock When tying livestock, clear away debris and tie the lead rope at least 4 feet above the ground to prevent entanglement. Tie the animal to a secure object using a rolling slipknot. Where possible, tie the rope to an object that the animal cannot walk completely around. After tying livestock, do not cross under the lead rope. Do not tie the animal to a wire fence or vegetation that could be damaged, such as a Saguaro Cactus or young Palo Verde. Do not position yourself in front of tied livestock. Halter animals under the bridle. Unless picketing livestock, do not tie animal to movable objects. Livestock must be trained in picketing before use. Use cotton rope ½ inch in diameter for picketing. When near livestock, stay close, maintain contact and talk to the animal. 	
Transporting livestock in trailers	Personnel not knowledgeable in the use of trailers or hazards involved in loading and unloading livestock in trailer.	<ul style="list-style-type: none"> Personnel hauling livestock in trailers shall have the proper trailer endorsement. 	
	Animal slipping in trailer.	<ul style="list-style-type: none"> Secure footing for livestock, such as nonslip rubber matting or cleats. Cleats need to be inspected frequently for loose rotten boards. Sand or other absorbent or abrasive substance may be applied to floor as needed. 	
	Animal injuring itself in trailer.	<ul style="list-style-type: none"> Ensure the trailer selected has the appropriate height and length clearance for the livestock. The trailer shall be free of sharp edges that might injure livestock during transport. 	
	Loading livestock into trailer.	<ul style="list-style-type: none"> Never ride livestock into trailer. If it is necessary to lead animal into a two-stall trailer, do not get into the same stall with or in front of the animal, unless there is an escape door and it opens. When hauling one animal in a two-stall trailer, secure animal on the left side to keep weight near the center of road. Hook divider chains on two-stall trailers. 	

		<ul style="list-style-type: none"> • If trailer is equipped with a loading ramp, rest ramp on level surface. Stand to one side when raising and lowering ramp. • Do not carry loose gear, personnel and animals together. • Secure animal in trailer by tying lead rope to the side of the stock trailer or area provided in a two-stall trailer.
	Unloading livestock from trailer.	<ul style="list-style-type: none"> • Always untie animal before opening tailgate of two-stall trailer. Untie animal from outside of stock trailer if you cannot safely untie from within trailer to prevent from being stepped on or crushed against side of trailer. • Unhook divider chains on two-stall trailer. Open the tailgate from the side and stand clear. The animal may back out rapidly from trailer. Make sure footing is stable before unloading. • Unload animals before jacking up a trailer to change a tire.
Securing animal in trailer.	Animal spooking, setting back, breaking halter, or lead rope while being tied in trailer.	<ul style="list-style-type: none"> • Halt livestock and fasten the animal's head securely. • Use a rolling slipknot or hitching rack-tie to secure livestock. • Secure excess rope away from livestock so it does not drag on the ground and entangle around livestock's legs and feet.
Driving and trailering livestock.	Road conditions, ice, mud, snow, rain, visibility, fog, ect.	<ul style="list-style-type: none"> • Be cautious, drive defensibly, and according to road conditions. • Don't take unnecessary risks.
	Other motorist	<ul style="list-style-type: none"> • Drive defensibly. Always be alert. Yield right-of-way to other motorists.
	Obstacles on road-deer, cow, hunters, etc.	<ul style="list-style-type: none"> • Look way out in front of you and scan the road. Maintain a safe following distance.
	Vehicle or mechanical failures.	<ul style="list-style-type: none"> • Routine PM inspections with follow up repairs, if necessary.
	Brakes locking up or not working, bad tires, 4x4 not working, lights not working, etc.	<ul style="list-style-type: none"> • Annual inspections – professional mechanics. • Conduct pre-trip safety inspection of trailer/truck. • Make sure trailer brake regulator is adjusted for the load you are hauling.
	Changing weather conditions.	<ul style="list-style-type: none"> • Be prepared with a supply of items in vehicle such as food, water, sleeping bag, etc. • Check weather forecasts before and during trip.
	Driving fatigue & attentiveness, not paying attention, one's ability to stay focused on driving.	<ul style="list-style-type: none"> • Admitting to yourself that you are tired or sleepy. Pull over, get out, walk around, rest or get relieved. Follow driving/rest guidelines as outlined in FSH 6709.1, Chapter 10, and paragraph 12.31.
	Livestock getting smashed, stepped on, run over, etc.	<ul style="list-style-type: none"> • Have only trained and certified personnel haul livestock.
	Throwing livestock off their feet in the trailer or struggling in trailer.	<ul style="list-style-type: none"> • Avoid sudden stops. Don't take turns too fast. Don't take off too fast. Know the trailering characteristics and pecking order of animals next to each other. • Remember, livestock may shift from side to side and back to front, making the load unstable.
	Tire blowing out or swerving to miss objects on road.	<ul style="list-style-type: none"> • Don't whip steering wheel, hold steady on wheel. • Sometimes it is better to hit obstacle but only if it won't cause damage or injury.
	Loose item in cab of vehicle.	<ul style="list-style-type: none"> • Make sure there are none or stop and secure.
	Passing other or others passing you.	<ul style="list-style-type: none"> • Ask yourself if it is necessary to pass. Make sure you have enough room and time to safely pass and allow extra room when being passed. Do not exceed speed limit for trailer and posted speed limit on road.
Trailer	Accident	<ul style="list-style-type: none"> • Only trained and certified personnel are to operate trailers.
	Trailer coming unhooked from truck.	<ul style="list-style-type: none"> • Always walk around truck and trailer before leaving. • Check safety chains, latches, wiring, tires, etc. • Conduct pre-trip safety inspection of trailer/truck. • Check trailer coupling at every rest stop.
	Overloading; too heavy; too many animals.	<ul style="list-style-type: none"> • Stay within GVW guidelines.

	Backing up trailer.	<ul style="list-style-type: none"> Use a spotter. When one is not available, get out of vehicle and check area to rear, sides, front and overhead to ensure vehicle is clear of obstructions.
	Switching trucks and trailers.	<ul style="list-style-type: none"> Make sure you are familiar with the operations of different trucks and trailers.
	Accident with trailer and livestock.	<ul style="list-style-type: none"> Call dispatch, especially if injury to persons. Seek medical help. Follow proper procedures for reporting accident. Accident forms should be in vehicle book. Call back to office to report accident and get help if needed. Seek veterinary care if injury to animals. Remember, if animals are injured they will be in pain and struggling to get up. Do not place yourself in harm's way while trying to aid animal.
Riding Animal	User unfamiliar with livestock.	<ul style="list-style-type: none"> The District Stock Manager shall match livestock with employees according to riding skills. District Stock Managers are responsible for certifying employees as to their abilities as outlined in the Forest Stock Plan before use of stock can occur. Instruct employees that all livestock can be dangerous. Before riding, hold tailgate safety sessions addressing livestock habits and characteristics. Protective headgear designed for livestock riding is recommended and encouraged for riders and should be available to employee upon request. Headgear shall meet American Society for Testing and Materials (ASTM) and Safety Equipment Institute (SEI) standards. If rider is under 18, District Stock Manager needs to check with the State to see if a helmet is required.
	Picking out hooves.	<ul style="list-style-type: none"> User would be trained in the proper technique for lifting feet and picking out hooves before being certified in the use of livestock. Check the animal's shoes for excessive wear and looseness. Schedule farrier appointments when needed. The Forest will use professional farrier services for all shoeing needs. Hooves should be checked and clean before riding and if needed at the end of the day.
	Saddling animal.	<ul style="list-style-type: none"> When working around stock, always speak to an animal when approaching from any direction. Inspect saddle and equipment (tack) to ensure it is in good condition. It is recommended that saddles and tack be cleaned and oiled at least once a year. Bridle stock before mounting. Always lead an animal around after being mounted and before being mounted or packed to ensure saddle is fitting properly. Adjust cinch again before mounting or packing.
	Mounting and then riding animal.	<ul style="list-style-type: none"> When mounting animal, swing leg well over animal's hindquarter so as to not kick animal and then animal runs away. Do not wrap or tie reins around saddle horn. Do not tie the lead rope around the lead horse's saddle or wrap the rope around your hand. Keep excessive slack out of the rope. Do not run animal. Always carry a cutting tool, such as a multi-purpose tool, for cutting ropes in case of an emergency. Always carry first aid kits for personnel and livestock. Do not secure tools or equipment on livestock being ridden or carry them in your hands while riding. Riding bareback is not permitted.
	Foot getting hung up in stirrup and being dragged.	<ul style="list-style-type: none"> Require footwear designed for riding, with a heel high enough to reduce the likelihood of boot going through stirrups or getting hung up in stirrup, and a flat or small lug sole so that the boot can slip out of stirrup easier. Instruct user in proper foot placement (under ball of foot) for riding and in proper mounting and dismounting procedures. Recommend the use of breakaway stirrups or stirrup coverings (tapaderos), which prevent the foot from going through the stirrup. Use appropriate sized stirrups for the rider's foot (not too big or too small).

	User "I know it all and done it all" attitude.	<ul style="list-style-type: none"> Change in attitude. Do not certify. Only Forest and District Stock Managers can certify individuals.
	Riding alone.	<ul style="list-style-type: none"> Only personnel certified as an Unsupervised User may ride alone. Unsupervised User is defined in the Forest Stock Plan. Leave itinerary at the office and follow check in procedures. Consider riding with a helmet since you are alone and there is no one to render aid if needed.
Field Work	Hazardous footing – ice, snow, mud, loose rocks.	<ul style="list-style-type: none"> Know when to get off and walk your animals.
	Changing weather conditions – lightning, thunder, rain, snow.	<ul style="list-style-type: none"> Be alert to changing weather conditions. Never ride an animal when a lightening storm is nearby or in progress. Dismount and seek shelter. Tie stock away from your shelter. Check weather forecasts prior to departure and during trip.
	Obstacles in path, such as tools, blowing paper, trees, rocks, etc.	<ul style="list-style-type: none"> Always be prepared for animals spooking. Watch out for low-hanging obstacles, such as branches and wires.
	High water crossing.	<ul style="list-style-type: none"> Do not cross if water is too swift and/or over your head. This is determined by the time of year and after heavy rainstorms. Springtime is the time for spring run-off from snowmelt. Heavy rains may increase streamflow. If you cannot talk at a normal volume around a stream, then water may be too high to cross. Do not cross if you feel uncomfortable in doing so.
	Sudden load noises such as gun shots.	<ul style="list-style-type: none"> Always anticipate problems and be ready to deal with them.
	Other users – Llamas, backpackers, mountain bikes, etc.	<ul style="list-style-type: none"> Desensitize livestock.
	Bears, moose, insects, etc.	<ul style="list-style-type: none"> Control your animal. Maintain safe distance of 200 yards or more.
Packing livestock	User unfamiliar with packing techniques.	<ul style="list-style-type: none"> Only persons competent and certified in packing and unpacking livestock shall perform these tasks. Certification requirements are outlined in the Forest Stock Plan.
	Packing livestock.	<ul style="list-style-type: none"> Keep the animal's back clean, saddle pad straight and smooth, saddle properly fitted and tight and side packs as equal in weight as possible. Use breakaways to tie pack strings together. As a courtesy, generally yield to uphill pack strings in the morning and yield to downhill pack strings in the evening. There are exceptions where it may be safer to yield to larger or less experienced pack strings. Hikers should yield to stock traffic. When encountering hikers who are unfamiliar with stock, ask them to stand on the downhill side of the trail and wait quietly for the stock to pass. If stock spooks, standing downhill will encourage them to go uphill and lessen chance of an accident.
Feeding livestock	Aggressive behavior, risk of colic.	<ul style="list-style-type: none"> Be alert when in corral with livestock. Exercise caution and be prepared to get out of the way. Do not water or feed hot, sweaty animal until it has cooled off.
Performing Trail Work with Livestock	Injury to personnel, injury to animal	<ul style="list-style-type: none"> Stock should be dismounted in order to perform any activity relating to trail maintenance, especially while using tools. NO tool should be used from horseback. Dismount before performing an act such as brushing. See trail maintenance JHA for safety during hand tool use. Be sure that tools are properly secured for travel by horseback and unlikely to cause injury. Do not secure tools or equipment on livestock being ridden or carry them in your hands while riding.
Additional Field Concerns	Weather, Injuries, Environmental, Public Contacts, etc.	<ul style="list-style-type: none"> Be familiar with weather forecasts and take appropriate gear. Be prepared for rain, hail, snow, lightening, extreme heat or flooding. Watch for changing conditions throughout the day. Ensure you are compliant with the Trail Maintenance JHA for further safety information on these topics.

Personal Protective Equipment		<ul style="list-style-type: none"> The appropriate Personal Protective Equipment (PPE) for general trails and wilderness work includes long-sleeved shirts, long pants, and leather hiking boots with firm, flexible support, and non-skid or slip-resistant soles and heels when traveling off-trail. All of the above plus a hardhat, leather gloves, and eye protection are required when performing a trail work or other site maintenance work with tools. The following PPE is required for backcountry travel: first aid kit, map and compass, matches or fire starter in weatherproof container, water or water purifier, extra food, flashlight with extra batteries/bulb, emergency communication device, eye protection and sunscreen, lightweight shelter and appropriate clothing for climactic conditions. Recommended PPE includes a GPS receiver, multi-purpose belt tool, whistle, and signal mirror..
Emergency Response Plan		<ul style="list-style-type: none"> Notify Dispatch by radio or dial 911 immediately. Be prepared to give the information listed on last page in the Emergency Evacuation Procedures (EEP) and maintain documentation of the incident. Notify supervisor as soon as possible of the incident. Identify people in group who are currently certified to render first aid and perform CPR. Carry a personal first aid kit or know the location of the nearest one. These kits should be checked periodically to ensure contents are present and in working order. Use blood borne pathogen precautions while providing first aid to the sick and injured. Utilize cell phone, satellite phone/SPOT, or radio where reception is available and set up appropriate emergency contacts prior to going out in the field. Check-in before project and check-out after project with Supervisor.
<p>Safety Note: All too often, the animal is undeservingly blamed for a person being injured, hurt or for an accident of some type. The facts are that most livestock related injuries are preventable by the actions of the user. Refer to Health and Safety Code Handbook (FSH 6709.11). Only people possessing the necessary KSA's should handle livestock. Those without should have adequate supervision.</p>		
10. LINE OFFICER SIGNATURE 	11. TITLE District Ranger	12. DATE 12/13/2019

Previous edition is obsolete

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