

JOB SAFETY ANALYSIS	JOB TITLE OR OPERATION: Elk Ground Surveys	DATE:	NEW X REVISED
ORGANIZATION: NPS	LOCATION: ROMO	DEPARTMENT: Resource Management	EMPLOYEE / OPERATOR: Park Employees/ Volunteers
SUPERVISOR:	ANALYSIS BY:	REVIEWED BY:	APPROVED BY:

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE):	Seat Belt, Appropriate Footwear, Adverse Weather Gear/Clothing, Drinking water, Backcountry Gear for off road routes
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SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS UNSAFE ACTS OR CONDITIONS	RECOMMENDED ACTION OR PROCEDURE FOR ALL: REPORT ALL INJURIES AND ACCIDENTS TO SUPERVISOR.
VEHICLE INSPECTION	<ul style="list-style-type: none"> Poor vehicle operation or vehicle failure. 	<ul style="list-style-type: none"> Perform walk-around check of vehicle before driving. Notify supervisor immediately of vehicle malfunction. Respect park vehicles as if they were your own.
DRIVING VEHICLES	<ul style="list-style-type: none"> Hitting or getting hit by another vehicle, person, wildlife or object. 	<ul style="list-style-type: none"> Wear a seat belt. Be alert; look both ways; drive defensively. Abide by traffic laws. Use hazard lights when driving slowly. <p>Pull off the road, completely stop vehicle, and set parking brake when observing animals and filling out data sheet.</p>
	<ul style="list-style-type: none"> Adverse road conditions. 	<ul style="list-style-type: none"> Do not proceed on an unsafe road or under unsafe conditions.
	<ul style="list-style-type: none"> Falling asleep. 	<ul style="list-style-type: none"> Get adequate rest.
	<ul style="list-style-type: none"> Mechanical Failure, Break-downs 	<ul style="list-style-type: none"> Keep current on preventative maintenance checks Walk around vehicle to check for flat or damaged tires, fluid leaks, etc. Check brakes by pressing firmly on the foot pedal prior to moving the vehicle Do not drive vehicle found unsafe
	<ul style="list-style-type: none"> Run out of Fuel 	<ul style="list-style-type: none"> Check fuel level <p>If vehicle uses alternative fuel, familiarize yourself with the refueling procedures. Know in advance where fueling stations equipped with such a fuel are located.</p>
	<ul style="list-style-type: none"> General Hazards 	<ul style="list-style-type: none"> Comply with all Colorado traffic regulations All vehicle occupants shall wear seat belts. The vehicle operator will ensure passengers are wearing seat belts prior to placing the vehicle in motion. Make concessions to other drivers who are unskilled or ignorant of the hazards they create. Drive defensively and yield right-of-way even when by the rules of the road it is yours. Be aware of traffic situations developing far ahead of the vehicle

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DRIVING VEHICLES (CONT.)	<ul style="list-style-type: none"> • Vehicle not equipped for emergency 	<ul style="list-style-type: none"> • Verify factory installed safety devices and equipment has not been nullified, altered, or removed. • Ensure that the vehicle is equipped with the following: • Safety belts for driver and passengers • Flashlight • First aid kit • Warning signs, reflectors, and/or flares • Window scraper • Tire changing equipment
	<ul style="list-style-type: none"> • Poor Visibility 	<ul style="list-style-type: none"> • Check windshield, wipers, and wiper fluid level • Scrape snow/ice from all windows • Keep windows, mirrors, and lights clean • Check headlights • Adjust Mirrors
	<ul style="list-style-type: none"> • Vehicle operator unfamiliar with vehicle 	<ul style="list-style-type: none"> • Operator should become familiar with the function and location of all controls prior to moving the vehicle.
	<ul style="list-style-type: none"> • Poor road conditions 	<ul style="list-style-type: none"> • Never drive faster than road conditions and traffic allow
	<ul style="list-style-type: none"> • Steep Grades 	<ul style="list-style-type: none"> • Use engine compression and gearing to slow down a vehicle on steep downhill grades. Do not ride and overheat your brakes.
	<ul style="list-style-type: none"> • Narrow roads and blind turns 	<ul style="list-style-type: none"> • Slow down and proceed with caution. • Keep right. Drive as far to the right as possible without driving on the shoulder. • Be able to stop within less than half of the visible distance.
	<ul style="list-style-type: none"> • Oncoming traffic on narrow road 	<ul style="list-style-type: none"> • Anticipate oncoming traffic. Look for pullouts in the roadway to allow safe passing of oncoming vehicles. • Bring vehicle to stop. Allow oncoming traffic to pass you.
	<ul style="list-style-type: none"> • Unexpected Wildlife 	<ul style="list-style-type: none"> • Slow down and try to avoid the animal. Generally it is safer to hit the animal rather than drive off the road or cross the centerline and risk a head-on collision
	<ul style="list-style-type: none"> • Pedestrians 	<ul style="list-style-type: none"> • Honor the right-of-way of pedestrians

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EMERGENCY STOPPING	<ul style="list-style-type: none"> • Struck by Traffic 	<ul style="list-style-type: none"> • When safe to do so move vehicle to the shoulder of the road, away from traffic. • Set emergency brake • Activate four-way flashers • Keep alert to passing traffic • Exit vehicle when traffic volume/flow presents undue hazards. • Raise hood • Display emergency reflectors, signs, and/or flares
PARKING	<ul style="list-style-type: none"> • Striking Vehicles, Objects 	<ul style="list-style-type: none"> • When parking, position the vehicle for a forward departure. If the vehicle must be backed into a space, use a person when available to serve as a guide for backing. • Prior to exiting the vehicle, shut off the engine, set the emergency brake, and put the transmission in gear or park as appropriate. • If the vehicle is parked on a slope, use chock blocks or turn the front wheels such that a gravity-induced motion is arrested.
LEAVING A PARKING SPACE	<ul style="list-style-type: none"> • Impact with unseen objects 	<ul style="list-style-type: none"> • Walk around the vehicle to check for hazards and obstructions • If the vehicle must be backed, use a spotter if possible to serve as a guide when backing.
BACKING VEHICLE	<ul style="list-style-type: none"> • Backing into vehicles, person, wildlife or object. • Backing without a backer 	<ul style="list-style-type: none"> • Back into all parking space. • If you are alone and do not have a backer, walk around the vehicle before backing to survey the area. If you feel you can back the vehicle safely, do so. If backing cannot be done safely park vehicle in the safest manner. • Never back up or make a U-turn on blind corners. • Select a wide spot with a view that provides adequate sight distance in each direction • Always use a person when available to serve as a guide for backing • Back the rear of the vehicle toward a cut bank. • Use caution when backing on slope-filled edges of roadways. • Always face danger.
OBSERVING ELK	<ul style="list-style-type: none"> • Unexpected elk behavior 	<ul style="list-style-type: none"> • Observe animals from within the vehicle if possible. Use binoculars and/or spotting scopes to reduce the need to get out of vehicle when observing. • If it is necessary to get out of vehicle, observe animals from a safe distance. Use binoculars and/or spotting scope to avoid the need to approach elk. Keep a clear route of escape to the vehicle open and return to the vehicle if animals display any signs of irritation.

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<p>FOOT TRAVEL</p>	<ul style="list-style-type: none"> • Falling or tripping due to wet areas, holes, fences, poor footing, snow and ice, uneven terrain, loose/rolling rocks and heavy pack. • Terrain & environmental hazards associated with work that occurs in mountainous and high altitude terrain during all seasons. 	<ul style="list-style-type: none"> • Exercise extra caution in parking lots and along roadsides if conditions are wet, snowy or icy. Use YakTracs to reduce the possibility of slipping on ice or snow. • Understand and practice situational awareness & risk management at all times. • Plan ahead & identify necessary PPE for your trip (i.e. Wear proper footwear; ensure protection from environmental conditions such as precipitation, wind, cold, heat; bring drinking water) anticipate a full day and even a night out; consider you may have to care for someone else.) • If surveying a route that requires hiking be prepared with an appropriately equipped backcountry pack. Guard against overloading yourself with unnecessary equipment. Recognize that in a mountain environment speed & the ability to travel quickly & efficiently, at times, may equate to safety. Unnecessarily heavy packs <u>may</u> be hazardous to safe travel in rugged terrain. STRIKE THAT BALANCE between adequate preparedness and excess. Work with supervisors & other experienced personnel to develop your own needs and the ability to adequately assess and prepare. • Be alert to changes in terrain & weather. • Carry the necessary tools required for the job. (i.e. avalanche beacon, probes, and shovel, when traveling in winter, etc. etc.). • Stay in shape. Know & monitor your personal fitness level & that of others in your group. Adjust plans accordingly. Carry water or a filter • Have an approved First Aid Kit on hand. • If possible, take a coworker when traveling in areas of high risk or when conducting high risk activities. • Communications are a life link. Carry a radio & spare battery at all times. Ensure that equipment is working properly; batteries are fully charged, etc. Know and consult radio coverage maps. Be prepared to take a satellite phone if determined necessary. • If backcountry travel is required file a written backcountry route plan with dispatch and your supervisor. If you deviate from this plan, notify dispatch. At key points during your trip (i.e. destination reached, decision-making points such as summits, junctions, saddles, etc.) re-contact dispatch & provide a status. Request status checks when traveling through hazardous areas (i.e. when crossing a known or suspected avalanche path.)

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<p>WORKING IN ADVERSE WEATHER</p>	<ul style="list-style-type: none"> • Cold, wet and/or snowy weather • Getting struck by lightning 	<ul style="list-style-type: none"> • Be prepared with adequate cold weather clothing whether conducting survey by vehicle or by foot. • Schedule surveys accordingly if thunderstorms are likely. • If you see or hear a thunderstorm coming, go inside a sturdy building or vehicle. • You are in danger from lightning if you can hear thunder. • Carry a pack or insulating pad if you are not working near a building or vehicle. • If you are caught in a lightning storm, call dispatch to tell them you will be out of radio contact until the lightning storm passes. Call back in after the storm has passed. • If you can't get inside and if you feel your hair stand on end, lightning is about to strike. • Crouch down on your pack or insulating pad on the balls of your feet and keep your feet close together. • Place your hands on your knees and lower your head. • Make yourself the smallest target possible and minimize contact with the ground. • Members of a party should stay separated by at least ten feet. • Stay away from tall things like trees, towers, fences, telephone lines, or power lines. • Stay away from high mountain passes and high open meadows. If caught in these areas rapidly descend to a heavily forested area, however, stay at least 8 feet away from the trunk of the average height tree. • Stay away from metal things that lightning may strike. • Stay away from running water. • Call for help on your radio or on the nearest phone; be prepared to give detailed information of the victim or victims status, and when and where the accident happened. • Administer First Aid and CPR if certified or instructed to do so. <p>Take a Backcountry First Aid and CPR Class.</p>