

JOB SAFETY ANALYSIS	JOB TITLE OR OPERATION: Exotic Plant Removal	DATE:	__X__ NEW REVISED
PLANT / LOCATION: ROMO	COMPANY / ORGANIZATION: NPS	DEPARTMENT: Resources Management and Research	EMPLOYEE / OPERATOR: ALL
SUPERVISOR:	ANALYSIS BY: Resources Operations Crew	REVIEWED BY:	APPROVED BY:

REQUIRED AND / OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT:	GLOVES, EAR, EYE & SKIN PROTECTION, RESPIRATOR
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SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED / REQUIRED ACTION OR PROCEDURE FOR ALL: REPORT ALL INJURIES OR ACCIDENTS TO SUPERVISOR.
<u>MECHANICAL PLANT REMOVAL</u>	<ul style="list-style-type: none"> Piercing of skin by spines. Strain or injury to back. 	<ul style="list-style-type: none"> Wear gloves to prevent spines from piercing skin. Maintain proper posture when digging and lifting plants. Wear orange safety vests when working near the road. Stretch throughout the day to minimize back and neck pain, strains and sprains.
	<ul style="list-style-type: none"> Piercing of skin by spines. 	<ul style="list-style-type: none"> Wear gloves to prevent spines from piercing skin.
	Strain or injury to back while transporting bags.	<ul style="list-style-type: none"> Use proper lifting and carrying posture when transporting bags full of plant parts.
<u>LINETRIMMER OPERATIONS</u>	Spilling fuel and/or oil on self or ground. Fume inhalation	<ul style="list-style-type: none"> Do not overfill fuel reservoirs. Remove flammable objects before refueling. Use safety cans with spouts. Avoid inhaling fumes.
	<ul style="list-style-type: none"> Cuts, rocks and debris kicked up during operation, burns on muffler, noise pollution. 	<ul style="list-style-type: none"> Watch for debris being kicked up in areas of loose soil and perhaps avoid operating lime trimmers in such areas. Wear PPE (eye protection, ear protection, long sleeves). Avoid contact with muffler when machine is hot.
	Mishandling the linetrimmer.	<ul style="list-style-type: none"> Avoid contact with muffler when machine is hot. Wait to store if near flammable materials. Store so that fuel reservoir cap is up and fuel will not leak.
<u>TRAIL SURVEYS</u>	Lightening danger, backcountry travel dangers, footing.	<ul style="list-style-type: none"> Follow lightening procedures. Carry radio and extra battery. Carry map of area. Bring sufficient clothing, water, and food. Walk deliberately on trails and beware of tripping hazards.
<u>ROAD SURVEYS</u>	Traffic.	<ul style="list-style-type: none"> Wear orange safety vests. Walk on outside of road shoulder, as far from lane as possible. Make sure traffic sees you.
CACHE CLEANUP	Hantavirus or dust inhalation.	<ul style="list-style-type: none"> Wear dusk mask/respirator. Wet suspect areas down with bleach and water mix. Clean respirator after use.
<u>TOOL USE AND MAINTENANCE</u>	Leaving tools with the point facing upward or scattered around work site	<ul style="list-style-type: none"> Keep tools in a central location and always have the point of tools pointing towards the ground. Pickup tools before breaks, lunch, and at the end of each day. Place all tools and supplies in the caches at the end of each week.
	Tripping hazard.	<ul style="list-style-type: none"> Never place tools in a position where they may cause injury or pose a trip hazard. Be aware of your surroundings when using any tool.
	Cuts with sharp tool edge. Splinters from wood handles. Metal shards when using grinder.	<ul style="list-style-type: none"> Wear gloves when sharpening tools. Wear eye protection and gloves when operating grinder. Sand wood handles if wood is beginning to splinter.
<u>CHEMICAL APPLICATION</u>	Spills during improper storage.	<ul style="list-style-type: none"> Store chemicals in original container.

Chemical storage		<ul style="list-style-type: none"> Follow storage procedures on label. Follow state and federal storage laws and regulations. Store chemical containers upright with secured lids.
Equipment and PPE storage	Improper storage.	<ul style="list-style-type: none"> Store equipment cleaned. Store PPE separate from chemicals and application equipment.
Filling Water Tanks	Falling.	<ul style="list-style-type: none"> Use caution when climbing scaffold to fill water tank.
Mixing and loading spray equipment	Exposure to chemical concentrates.	<ul style="list-style-type: none"> Follow mixing and loading instructions on label. Wear proper PPE (rubber aprons, eye protection, gloves). Mix away from water sources on proper surface (preferably concrete pad). Triple rinse chemical containers and place rinse water into spray container.
Transporting chemicals	Spills during improper transportation.	<ul style="list-style-type: none"> Transport with containers secured. Ensure that containers are transported upright and without potential for spills. Carry chemicals and equipment in bed of truck, away from food, clean clothing, etc.
Applying chemicals	Improper application.	<ul style="list-style-type: none"> Have chemical MSDS's and labels on hand. Wear PPE according to label plus additional if necessary or desired. Apply according to label, away from water in most cases. Check weather forecast and note local weather patterns and conditions. Do not apply chemicals in high wind (> 10 mph) conditions and discontinue application if winds come up. Consider low relative humidity and resultant increase in drift potential. Make sure area is properly signed. Those without proper PPE may not enter spray area until after REI. Have plenty of water for cleaning on site. Do not eat or touch genitals until hands are thoroughly washed with soap and water.
Clean-up	Contamination to clothing, improper disposal of water and containers.	<ul style="list-style-type: none"> Wash clothing under chemical suit with heavy-duty detergent and let soak for extra cycle. Run wash cycle empty after cleaning clothes. Line dry clothing in sun. Dispose of any clothing that chemicals were spilled onto. Throw away chemical containers in trash after triple-rinsing unless otherwise noted on label. Clean all application equipment after use. Wear PPE while cleaning application equipment, including eye protection and rubber apron. Clean and properly store all PPE, dispose of necessary PPE.
Spills	Contamination to environment, wildlife, and people.	<ul style="list-style-type: none"> Have Spill Kit on hand at application site. Notify appropriate authorities in case of spill. <p>Do not enter site unless wearing proper PPE.</p>
<u>FLAMER OPERATION</u>	Improper lighting	<ul style="list-style-type: none"> Light with striker only, not with matches or lighter
	Burns and other injuries	<ul style="list-style-type: none"> Maintain safe distance from flamer end when lit. Let flamer cool down before touching. Wear proper PPE Follow correct operation procedures for lighting and use. Have first aid kit and emergency plan on hand.
	Propane leaks	<ul style="list-style-type: none"> Ensure that propane tank is closed off completely after use.
	Burning unwanted plants	<ul style="list-style-type: none"> Follow burn plan and prescription. Burn only target exotic plants.
	Inadvertent lighting of surroundings	<ul style="list-style-type: none"> Follow burn plan and prescription. Have prescribed personnel on hand.