

## 6.1 Off-Highway Vehicle Safety

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### SECTION I

#### Definitions

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*All-Terrain Vehicle (ATV):* A motorized off-highway vehicle (OHV) traveling on four or more low-pressure tires, having a seat to be straddled by the operator and a handlebar for steering control. Note: This policy does not cover the use of 3-wheel ATVs, which are prohibited.

*Amber Operations:* Moderate hazard. An OHV operation where the Risk Assessment Tool in Appendix A generates a value of 50 up to and including 69.

*ASI:* All-Terrain Vehicle Safety Institute

*ASI Certified ATV Instructor:* An individual who has successfully completed the ASI ATV Rider Instructor Certification Course and maintains certification status.

*Emergency Dismount Training:* ATV operator training on techniques for quickly and safely dismounting the ATV when a rollover is imminent. The ATV must not be put in a rollover situation during this training.

*Green Operations:* Low hazard. An OHV operation where the Risk Assessment Tool in Appendix A generates a value less than or equal to 49.

*Job Hazard Analysis (JHA):* A document that identifies hazards associated with specific work operations and lists safe actions or procedures for employees to follow.

*Maximum Cargo Rack Weight Limitation:* The weight limit specified by the manufacturer for the front cargo rack or the rear cargo rack.

*Maximum Gross Vehicle Weight:* The OHV weight limitation specified by the manufacturer including rider(s), attachments, fuel, oil, and all cargo.

*Maximum Towing Capacity:* The maximum towing capacity for an ATV or UTV as specified by the manufacturer.

*Off-Highway Vehicle (OHV):* For the purposes of this policy, an OHV means an ATV or UTV as defined in this section.

*Red Operations:* High hazard. An OHV operation where the Risk Assessment Tool in Appendix A generates a value of 70 or higher.

*Rollover:* OHV upset commonly due to steep terrain, slippery or uneven ground, large loads, top-heavy loads, and other environmental conditions or unsafe operating practices, including improper trailer/truck loading and unloading techniques.

*Rollover Protective Structure (ROPS):* A cage-like structure fastened to the UTV frame that complies with Society of Automotive Engineers (SAE) specification J2194-97 designed to protect the operator and passenger in case of UTV rollover. [Note: A cab/brush cage is not necessarily a rollover protective structure (ROPS). Some UTV manufacturers offer ROPS either standard or as an option.]

*T-Cloc Inspection:* A pre-ride inspection focusing on the OHV's Tires, Controls (levers, cables), Lights, Oil (fluids), and Chassis (frame, suspension).

*Utility Terrain Vehicle (UTV)* (also called a side-by-side): A motorized OHV having four or more low pressure tires, designed with side-by-side seats, seatbelts, steering wheel, and optional cab, brush cage, or ROPS.

*Vehicle Recovery/Extrication Equipment:* Equipment such as tow straps, winches, jacks, come-alongs, and the like.

*Well traveled area:* An area where encountering other people is routine, commonplace, and predictable during the time period the OHV will be operated in that area.

*Note:* Requirements specified for an OHV in this document are meant to apply to both an ATV and UTV. Requirements specified for an ATV, or conversely a UTV, are meant to apply only to that specific type of vehicle.

## **Scope**

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The policy applies to off-highway vehicles (OHV) as defined above. It does not apply to any other type of vehicle, e.g., jeeps, trucks, cars, golf carts (and golf cart type vehicles), three wheeled vehicles, snowmobiles, motorcycles, trail bikes, scooters, or any other vehicle used for the transportation of people or material, nor does it apply to the usage of stock animals.

## **SECTION II**

### **Off-Highway Vehicle Selection**

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- A. NPS superintendents will ensure that the Risk Assessment Tool in Appendix A and the ATV/UTV selection guide (below) are used as guidance to select the appropriate type of OHV for the operation to be conducted.
  1. Low Hazard Potential (Green Operations)
    - (a) Either ATV or UTV use is appropriate.
    - (b) REQUIREMENTS FOR OHV USE: See Tables 1 and 2 (below) and the relevant sections of this policy for operator qualifications, PPE, Operational Equipment, Loading and Transporting, and Vehicle Operating Requirements.
  2. Medium Hazard Potential (Amber Operations)
    - (a) UTV use is recommended over ATV use.
    - (b) ATV use for amber operations requires approval at the division chief (or equivalent) level, or higher.
    - (c) REQUIREMENTS FOR OHV USE: See Tables 1 and 2 (below) and the relevant sections of this policy for operator qualifications, PPE, Operational Equipment, Loading and Transporting, and Vehicle Operating Requirements.
  3. High Hazard Potential (Red Operations)

- (a) UTV use is strongly recommended and ATV use is discouraged. ATV use during red operations must be approved at the superintendent (or equivalent) level. The superintendent may consider advanced operator skills and experience along with unique travel problems and operational necessities when making this decision.
- (b) REQUIREMENTS FOR OHV USE: See Tables 1 and 2 (below) and the relevant sections of this policy for operator qualifications, PPE, Operational Equipment, Loading and Transporting, and Vehicle Operating Requirements.

**Table 1  
ATV Requirements**

|                               | <b>GREEN</b>   | <b>AMBER</b>   | <b>RED</b>   |
|-------------------------------|--|--|--|
| TRAINING                      | BASIC LEVEL  | ADVANCED LEVEL;<br>INCLUDING<br>EMERGENCY DISMOUNT   | ADVANCED LEVEL;<br>INCLUDING<br>EMERGENCY DISMOUNT   |
| PERSONAL PROTECTIVE EQUIPMENT | <ul style="list-style-type: none"> <li>• Helmet **</li> <li>• Gloves</li> <li>• Clothing requirements as specified by JHA</li> <li>• Footwear with slip resistant soles</li> <li>• Eye protection</li> </ul> | <ul style="list-style-type: none"> <li>• Helmet</li> <li>• Gloves</li> <li>• Clothing requirements as specified by JHA</li> <li>• Footwear with slip resistant soles</li> <li>• Eye protection</li> <li>• Additional PPE as required by JHA or technical module, i.e., pesticide application, drip torch, etc.</li> </ul>  | <ul style="list-style-type: none"> <li>• Helmet</li> <li>• Gloves</li> <li>• Clothing requirements as specified by JHA</li> <li>• Footwear with slip resistant soles</li> <li>• Eye protection</li> <li>• Additional PPE as required by JHA or technical module, i.e., pesticide application, drip torch, etc.</li> </ul>  |
| OPERATING EQUIPMENT           | <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• First aid kit</li> </ul>   | <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• First aid kit</li> <li>• 4WD/AWD capability</li> <li>• Lockable/limited slip differentials recommended</li> <li>• Anti-sway bars*</li> <li>• Communication device</li> <li>• Vehicle recovery/extrication equipment if specified in local JHA</li> <li>• Power plant sufficient to preclude stalling on steep terrain under full load</li> </ul> | <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• First aid kit</li> <li>• 4WD/AWD capability</li> <li>• Lockable/limited slip differentials recommended</li> <li>• Anti-sway bars*</li> <li>• Communication device</li> <li>• Vehicle recovery/extrication equipment if specified in local JHA</li> <li>• Power plant sufficient to preclude stalling on steep terrain under full load</li> </ul> |
| OPERATING REQUIREMENTS        | <ul style="list-style-type: none"> <li>• Prepare and follow JHA</li> <li>• Conduct pre-ride inspection</li> <li>• Operate within mfg'r's limitations</li> </ul>  | <ul style="list-style-type: none"> <li>• Prepare and follow JHA</li> <li>• Conduct pre-ride inspection</li> <li>• Hold tailgate safety meeting</li> <li>• Operate within mfg'r's limitations</li> <li>• Solo travel recommended in well traveled areas only</li> <li>• Use check-in/check-out system</li> </ul>  | <ul style="list-style-type: none"> <li>• Prepare and follow JHA</li> <li>• Conduct pre-ride inspection</li> <li>• Hold tailgate safety meeting</li> <li>• Operate within mfg'r's limitations</li> <li>• Solo travel strongly discouraged</li> <li>• Use check-in/check-out system</li> </ul>   |

\*Or equivalent, if available from the manufacturer when the ATV is equipped with independent suspension.

\*\* See exception in Personal Protective Equipment section.

**Table 2**  
**UTV Requirements**

|                               | <b>GREEN</b>   | <b>AMBER</b>   | <b>RED</b>   |
|-------------------------------|--|--|--|
| TRAINING                      | AS RECOMMENDED BY MANUFACTURER   | AS RECOMMENDED BY MANUFACTURER   | AS RECOMMENDED BY MANUFACTURER   |
| PERSONAL PROTECTIVE EQUIPMENT | <ul style="list-style-type: none"> <li>• PPE if required by the JHA</li> </ul>   | <ul style="list-style-type: none"> <li>• PPE if required by the JHA or technical module i.e., pesticide application, drip torch, etc.</li> <li>• Helmet</li> </ul>   | <ul style="list-style-type: none"> <li>• PPE if required by the JHA or technical module i.e., pesticide application, drip torch, etc.</li> <li>• Helmet</li> </ul>   |
| OPERATING EQUIPMENT           | <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• First aid kit</li> <li>• Seat and seat belt for each rider</li> </ul>  | <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• First aid kit</li> <li>• Seat and seat belt for each rider</li> <li>• 4WD/AWD capability</li> <li>• Lockable/limited slip differentials recommended</li> <li>• Anti-sway bars*</li> <li>• Communication device</li> <li>• Vehicle recovery/extrication equipment if specified in local JHA</li> <li>• Powerplant sufficient to preclude stalling on steep terrain under full load</li> <li>• ROPS</li> </ul> | <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• First aid kit</li> <li>• Seat and seat belt for each rider</li> <li>• 4WD/AWD capability</li> <li>• Lockable/limited slip differentials recommended</li> <li>• Anti-sway bars*</li> <li>• Communication device</li> <li>• Vehicle recovery/extrication equipment if specified in local JHA</li> <li>• Powerplant sufficient to preclude stalling on steep terrain under full load</li> <li>• ROPS</li> </ul> |
| OPERATING REQUIREMENTS        | <ul style="list-style-type: none"> <li>• Prepare and follow JHA</li> <li>• Conduct pre-ride inspection</li> <li>• Operate within mfg'r's limitations</li> <li>• Wear seat belts</li> </ul> | <ul style="list-style-type: none"> <li>• Prepare and follow JHA</li> <li>• Conduct pre-ride inspection</li> <li>• Hold tailgate safety meeting</li> <li>• Operate within mfg'r's limitations</li> <li>• Use check-in check-out system</li> <li>• Wear seat belts</li> </ul>  | <ul style="list-style-type: none"> <li>• Prepare and follow JHA</li> <li>• Conduct pre-ride inspection</li> <li>• Hold tailgate safety meeting</li> <li>• Operate within mfg'r's limitations</li> <li>• Use check-in check-out system</li> <li>• Wear seat belts</li> </ul>  |

\* Or equivalent, if available from the manufacturer, when the UTV is equipped with independent suspension.

## B. Transition Period

1. When the above criteria necessitates a change in type of off-highway vehicle used to accomplish tasks at an NPS facility, the NPS unit should prepare an equipment replacement plan, promptly begin the transition, and complete the transition not later than 5 years from the effective date of this policy.

## SECTION III

### Qualifications

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#### A. Only qualified persons shall be authorized to operate an OHV.

1. NPS ATV operators must be qualified at either the Basic or Advanced Level as described below depending on the hazard potential of the operation (see table 1 above). Supervisors or park safety officials will review and annually certify the list of qualified ATV operators. [*Note:* Appendix B can be used to document the date of this training and establish the time period for re-evaluation of the ATV operator.]
2. To be qualified at the Basic Level, NPS ATV operators must successfully complete the following training:
  - (a) Introduction to Basic ATV Operation – an online course that is a prerequisite for field training.
  - (b) ATV Safety Institute (ASI) ATV Rider Course training taught by an ASI certified instructor.
  - (c) Safe operating procedures as specified in the local JHA, ASI, and owner's manual.
  - (d) Training on this policy.
3. To be qualified at the Advanced Level, NPS ATV operators must successfully complete the following training:
  - (a) Introduction to Basic ATV Operation as described above.
  - (b) ATV Safety Institute (ASI) ATV Rider Course training as described above.
  - (c) Training by an experienced operator on ATV operation under the conditions they will be used at the local park or operating unit. Training must include emergency dismount and technical modules as appropriate (e.g., wildland fire operations and pesticide application).
  - (d) Safe operating procedures as specified in the local JHA, ASI, and owner's manual.
  - (e) Training on this policy.

*Note 1:* Any ATV operator qualified by BLM training at the basic or advanced level is qualified to operate an ATV for the NPS consistent with that level of qualification.

*Note 2:* Currently, certified training for UTV operators does not exist. Each park and operating unit should assure that UTV operators are trained by an experienced UTV operator in the safe use of the UTV under the conditions it will be used at the local park or operating unit and in accordance with the manufacturer's operating manual, the park's JHA, and this policy.

4. All ATV operators shall be provided refresher training each year in accordance with a JHA and reevaluated by an ASI Certified Trainer every 3 years. The reevaluation shall be documented. Appendix B (ATV Operator Accountability/Certification Tracking Record) may be used to document the reevaluation. NPS field units are responsible for maintaining and tracking certifications.
  - (a) Reevaluation consists of demonstrating to the certified ATV trainer the operator's abilities in: operation of controls, basic servicing, handling, loading/tie-down, unloading, and operating over terrain typically encountered at the park or operating unit, utilizing the equipment the operator will use on the job. This may be accomplished during a check ride.
  - (b) Infrequent users (less than 10 hours of riding a year), including volunteers and Special Program enrollees, shall have a check ride before the scheduled use of the ATV for project work, or as determined by the ASI certified trainer.
5. All OHV operators must hold a valid state Motor Vehicle Operator's Permit. Operating restrictions identified on the operator's permit must be adhered to while operating an OHV (e.g., use of corrective lenses, etc).

## SECTION IV

### **Personal Protective Equipment and Operational Equipment**

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- A. Personal protective equipment (PPE) required for OHV use shall be identified in the JHA developed for the particular job. At minimum, the following PPE shall be provided and used:
  1. Occupant Restraint Use
    - (a) The operator and each passenger on a UTV must each wear a seat belt.
  2. Head Protection
    - (a) ATV operators shall wear a full, three-quarter, or one-half style motorcycle helmet with chin strap properly secured for green, amber, and red operations. The JHA will specify the use of the most protective helmet consistent with operational needs.

Exception: A helmet is not required for ATV use in those green operations where the vehicle is moved over level or flat ground at slow speeds for short distances and repeatedly mounted/dismounted. Examples include ATV use in and around campgrounds, administrative buildings, movement by mechanics in and out of shops, movement a few feet at a time by work crews,

etc. This exception does not apply to loading or unloading ATV's on trailers via ramps, etc.

- (b) If a UTV is operated in amber or red operations, the operator and passengers must wear helmets. If needed, head protection for the UTV operator and passenger in green operations will be specified by the local JHA depending on local conditions of use.
  - (c) The helmet shall meet Department of Transportation (DOT), ANSI Z90.1 or Snell (SMF) standards. If available, the use of an ANSI or Snell rated helmet is recommended in preference to a helmet that has only a DOT rating.
  - (d) The helmet shall be properly sized to fit the operator.
  - (e) Helmets shall be replaced as recommended by the manufacturer or sooner if a helmet is involved in an impact related accident.
3. ATV operators must utilize gloves if required by the local JHA depending on conditions of use. (e.g., brushy environment may warrant padded riding gloves as opposed to canvas gloves used for trash pickup).
4. Clothing
- (a) Clothing requirements for the OHV operator and passenger will be specified by the local JHA depending on conditions of use.
5. Footwear
- (a) ATV operators: footwear with slip resistant soles will be worn to help prevent the operator's feet from slipping off the foot rests. Footwear for specialized operations such as a lifeguard operating in a beach environment with life saving responsibility will be specified by the local JHA.
  - (b) If needed, special footwear requirements for the UTV operator and passenger will be specified by the local JHA depending on conditions of use.
7. Eye protection
- (a) ATV operators must wear safety glasses, goggles, or sunglasses that meet the ANSI Z87.1 standard as determined by the JHA based on the work environment (e.g., brushy environment may warrant goggles as opposed glasses).
  - (b) If needed, eye protection for the UTV operator and passenger will be specified by the local JHA depending on conditions of use and configuration of the UTV, e.g., if equipped with a cab, windshield, etc.
- B. PPE for Pesticide/Herbicide Application
- 1. OHV Pesticide Application - Applicators shall wear a helmet as described in A.2 above (not hard hats). The helmet shall be equipped with a removable, washable liner.
  - 2. Nitrile or other types of glove appropriate for the application and operator protection are to be worn during spray operations, replacing riding gloves.



3. To protect applicators from chemical exposure and for safe operation of the OHV, impervious boots with shank supports in the soles should be worn or impervious boots may be worn over leather riding boots.
4. Follow pesticide label instructions for other personal protective equipment, as specified.

### C. Operational Equipment

1. The following basic on-board equipment is required for all OHV use:
  - (a) Each OHV must have a first aid kit.
  - (b) Each OHV must have a fire extinguisher; 2.5 pound ABC rating, minimum.
  - (c) Each UTV must have seat and seatbelt for each rider.
2. In addition to the basic equipment listed above, the following equipment is required where an ATV is used in an amber or red operation.
  - (a) Vehicle recovery/extrication equipment if specified in the local JHA.
  - (b) A positive means of emergency communication, i.e., radio, cell phone, satellite phone.
  - (c) The ATV must have 4 wheel drive (4WD) or all wheel drive (AWD) capability.
  - (d) Lockable/limited-slip differentials are recommended.
  - (e) When the ATV is equipped with an independent suspension system it should also have anti-sway bars or the equivalent, if available from the manufacturer.
  - (f) Power plant sufficient to preclude stalling on steep terrain under full load conditions.
3. In addition to the basic equipment listed above, the following equipment is required where a UTV is used in an Amber or Red operation.
  - (a) The UTV must have ROPS (see *Note* below).
  - (b) Vehicle recovery/extrication equipment if specified in the local JHA.
  - (c) A positive means of emergency communication, i.e. radio, cell phone, satellite phone.
  - (d) The UTV must have 4 wheel drive (4WD) or all wheel drive (AWD) capability.
  - (e) Lockable/limited-slip differentials are recommended.
  - (f) When the UTV is equipped with an independent suspension system, it should also have anti-sway bars or the equivalent, if available from the manufacturer.
  - (g) Power plant sufficient to preclude stalling on steep terrain under full load conditions.

*Note:* Some ROPS equipped UTVs should be ordered with half-doors, side netting or other side protection equipment which prevents brush, branches, mud,

etc., from contacting the operator and passenger and which helps keep arms/legs inside the vehicle if a rollover event occurs.

4. The local JHA and local park policy will specify the minimum equipment required for backcountry travel. Minimum equipment requirements will be consistent with the backcountry travel procedures developed for each park unit and as outlined in the July 10, 2006 memorandum regarding backcountry travel procedures and training requirements and attached as Appendix E to this document.

## SECTION V

### **Loading and Transporting**

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- A. Operators shall wear the personal protective equipment described above and specified in the JHA while loading/unloading the OHV.
- B. An OHV being transported must be well secured to the transport vehicle, with the transmission in gear and the parking brake set. The transporting vehicle shall be of adequately rated capacity and capability when hauling the OHV.
- C. An OHV shall be secured using appropriately rated devices to prevent forward, backward, and sideways movement. When transporting an OHV via:
  1. Vehicle – During transport, it is recommended the tailgate be completely closed at all times. If the tailgate cannot be closed, all ATV tires must rest on the pick-up bed at all times. If a commercially manufactured restraining device is used, the number and type of tie downs should be addressed in the JHA.
  2. Trailer – If an OHV is transported on a trailer, the weight of the tow vehicle, OHV, and trailer shall not exceed the tow vehicle's maximum gross combined weight rating (GCWR), and the weight of the OHV shall not exceed the maximum rated trailer capacity.
- D. Securing devices for the OHV shall be in good condition and free of frays or splices to prevent equipment failure.
- E. Containers with hazardous materials contents, such as pesticides, flammable solids, or flammable liquids shall:
  1. Be secured separately from the OHV inside the bed of the truck to prevent movement;
  2. Be in good condition, free of leaks, without visible residue, and properly labeled;
  3. Meet DOT transportation regulations for over the road transportation when transporting hazardous material; and
  4. Have a copy of the Material Safety Data Sheet (MSDS) readily available when transporting hazardous material.
- F. Any materials, equipment, or gear in the pick-up bed shall also be secured from movement at all times.
- G. Trailers are the recommended method for transporting an OHV.

- H. Recommended hierarchy for loading an ATV into the back of a pickup truck is as follows:
  - 1. One piece, bi- or tri-fold ramps that are strapped, chained, bolted to the truck bed.
  - 2. Two individual ramps, a minimum of 10 inches wide and 72 inches long, positioned to assure that the manufacturer's maximum slope for operation of the OHV is not exceeded. **An 84-inch ramp length is strongly recommended.** Chains or straps must be used to secure the ramps to the vehicle and prevent rearward movement of the ramps during loading.
- I. Loading ramps must meet the following criteria:
  - 1. Fabricated of aluminum or steel and must be of welded construction. Driving surface must have closely spaced crossed members or mesh construction with high traction surface. Wooden ramps may not be used.
  - 2. Ramps may be one or two piece, rigid or folding. Hinges must be factory installed.
  - 3. The weight capacity of the ramp(s) shall meet or exceed the weight of the OHV.
- J. Trucks and trailers shall not be positioned across side slopes for loading or unloading operations.

## SECTION VI

### **Operation**

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- A. Each operator must be authorized in writing by their supervisor or park safety official to operate an OHV.
- B. An OHV may not be operated outside of the manufacturer's operating limitations. *Note:* OHVs are designed for off-road use and should not be operated on asphalt/concrete public roads. ATV use on paved surfaces should be avoided. If the vehicle must be operated on pavement the operator should turn gradually and go slowly.
- C. The supervisor shall ensure that a JHA is prepared for each work activity involving use of an OHV.
- D. Backcountry travel must comply with procedures outlined in the July 10, 2006 memorandum to Regional Directors, titled: *Backcountry Travel Procedures*. See Appendix E.
- E. Solo travel by ATV for amber operations is not recommended unless the area of operation is well traveled.
- F. Solo travel by ATV for red operations is strongly discouraged.
- G. Prior to operating any OHV in amber or red operations, tailgate safety meetings shall be held and documented specifically identifying the local hazards as identified within the JHA.

- H. Prior to operating any OHV in amber or red operations, a check-in/check-out procedure (COCI) must be developed and followed.
- I. Supervisors shall ensure that operators possess the skills required for the work project or activity in accordance with the local JHA.
- J. Before riding an OHV, a pre-ride inspection check such as T-CLOC (ASI Program) or similar check must be performed. The pre-ride inspection check for each OHV need only be documented once per operating work shift. The pre-ride inspection checklist provided in Appendix C may be used to document the pre-ride inspection. Inspection forms or durable, weather resistant vehicle inspection tags developed by local offices may also be used.
- K. An annual maintenance inspection from the manufacturer, certified OHV mechanic, or competent park employee is required. A copy of the inspection report will be maintained in the equipment history folder.
- L. Only the manufacturer's recommended number of passengers may be carried on an OHV.
- M. When parking an OHV:
  - 1. Turn ignition off, engage brake, and leave vehicle in "park" or the appropriate gear for the slope at the parking place;
  - 2. Consider blocking tires if parking on a steep incline/decline; and
  - 3. Remove keys if appropriate.
- N. An OHV may not be loaded in excess of the manufacturer's recommended maximum weight at any location on the machine including the cargo rack(s). The maximum gross vehicle weight shall not be exceeded. When carrying equipment, equalize the load to maintain balance, stability, and center of gravity. The manufacturer's loading instructions must be followed.
- O. When using an OHV to tow a trailer and/or equipment, the manufacturer's maximum permissible towing capacity shall not be exceeded. (*Note: Manufacturers specified towing capacity varies depending on grade or the slope of the terrain to be traveled.*) In addition, the trailer's weight rating shall not be exceeded.
- P. Equipment should be secured to the OHV as recommended by the manufacturer and as close to the rider as possible to maintain center of gravity. Additional precautions as specified in the JHA must be observed when carrying liquids. All tools or equipment transported on an OHV shall be secured.
- Q. Reckless driving and horseplay are prohibited.
- R. Deep or swift water crossings should be avoided if possible and only conducted with extreme care after careful examination of potential hazards. Hazards exist when:
  - 1. Stream bottom is unstable due to mud, sand, boulders, or submerged obstacles.
  - 2. Water depth is not consistent through the entire route of travel.
  - 3. Stream width prevents a complete view of the bottom across the route of travel.

4. Water depth and current may stall the engine.
  5. Current is forceful enough to require you to counteract it to maintain balance or direction of travel.
- S. Modifications that include changes to the frame, electrical systems, and other changes to the manufacturer's design of an OHV's mechanical configuration are not allowed.
1. Installation of "off-the-shelf" "add-ons," such as carry-all boxes, equipment bags, approved extended range fuel tanks, equipment racks or other attachments such as agriculture spraying equipment are allowed if installed and used in accordance with the manufacturer's recommendations.
  2. Fuel firing device operations using an ATV or UTV and the fuel firing device itself shall comply with the requirements in Appendix D.
- T. All NPS accidents shall be reported in the Safety Management Information System (SMIS) as required. Near miss incidents should also be reported via the SMIS system.
- U. When hazardous materials or pesticides are being transported, the JHA shall reflect the necessary actions to initiate emergency response procedures in the event of an accidental leak or discharge as appropriate for the region and state. The JHA shall include chemical name, classification, quantity, and precautions to be taken in the event of a spill or accident.
- V. All containers used for externally transporting fuel must meet specification requirements stipulated in the Interagency Transportation Guide for Gasoline, Mixed Gas, Drip-Fuel firing device Fuel, and Diesel prepared by the Missoula Technology and Development Center.

# Appendix A: Risk Assessment Tool

| OHV RISK ASSESSMENT TOOL TABLE                              |    |  |                             |                           |
|---|----|--|-----------------------------|---------------------------|
| Speed of Operation  | 1  | Under 10 mph                                   |                             |                           |
|   | 4  | 11 to 20 mph                                   |                             |                           |
|   | 9  | Over 20 mph                                    |                             |                           |
| Maximum Slope in Any Direction                              | 1  | Slight (<25% of mfgr's maximum)*               |                             |                           |
|   | 20 | Moderate (>26 % & < 75% of mfgr's maximum)*    |                             |                           |
|   | 40 | Steep (>75% of mfgr's maximum)*                |                             |                           |
| Surface Type  | 1  | Prepared Dirt/Gravel Road                      |                             |                           |
|   | 4  | Sand   |                             |                           |
|   | 9  | Soil   |                             |                           |
|   | 16 | Rock   |                             |                           |
| Surface Condition   | 1  | Firm   |                             |                           |
|   | 4  | Soft or Loose                                  |                             |                           |
|   | 9  | Slippery or Icy                                |                             |                           |
| Surface Configuration                                       | 1  | Ruts/Bumps/Irregularities (less than 6 inches) |                             |                           |
|   | 9  | Ruts/Bumps/Irregularities (6 to 12 inches)     |                             |                           |
|   | 25 | Ruts/Bumps/Irregularities (> than 12 inches)   |                             |                           |
| Load Weight   | 0  | No Load  |                             |                           |
|   | 1  | Up to 25% of Mfgr's Recom'd Maximum            |                             |                           |
|   | 4  | 26% to 50% of Mfgr's Recom'd Maximum           |                             |                           |
|   | 9  | 51% to 75% of Mfgr's Recom'd Maximum           |                             |                           |
|   | 16 | 76% to 100% of Mfgr's Recom'd Maximum          |                             |                           |
| Load Type   | 0  | No Load  |                             |                           |
|   | 1  | Solid attached to vehicle                      |                             |                           |
|   | 4  | Liquid in a baffled container                  |                             |                           |
|   | 9  | Liquid in an unbaffled container               |                             |                           |
| Accessibility of Use Area for Emergency Response            | 1  | Very accessible                                |                             |                           |
|   | 4  | Generally accessible                           |                             |                           |
|   | 9  | Generally inaccessible                         |                             |                           |
| Time Operating Vehicle by Same Rider in a Single Workday    | 1  | Under 1 hour                                   |                             |                           |
|   | 4  | 1 Hour to 4 hours                              |                             |                           |
|   | 9  | 4 Hours to 8 hours                             |                             |                           |
|   | 16 | Over 8 hours                                   |                             |                           |
| Distraction Potential of Other Task While Operating Vehicle | 0  | No Distraction                                 |                             |                           |
|   | 1  | Slight Distraction                             |                             |                           |
|   | 4  | Moderate Distraction                           |                             |                           |
|   | 9  | Significant Distraction                        |                             |                           |
| TOTAL OF CIRCLED VALUES                                     |    | UP TO 49<br>LOW HAZARD                         | 50 TO 69<br>MODERATE HAZARD | 70 & ABOVE<br>HIGH HAZARD |

## APPENDIX A OHV RISK ASSESSMENT TOOL

To compute the total level of risk for the ten elements, *circle the number* beside each element in the table that *best* describes the operation according to the guidance given below. Add the circled numbers to come up with a total risk score. Use the Green/Amber/Red scale and Section II of the policy as guidance to choose the safest vehicle for the operation.

### SPEED OF OPERATION

The intended **maximum** speed of operation for OHV use associated with the job activity.

### MAXIMUM TERRAIN SLOPE

The **maximum** slope that is known and/or expected to be encountered with the OHV during the job activity. If the manufacturer does not specify a maximum slope, the following guidance should be used: Slight (<11% slope) Moderate (11%-34% slope) Steep (>34% slope). **NOTE: An OHV may not be operated on any slope that is greater than the maximum slope recommended by the manufacturer.**

### SURFACE TYPE

The type of surface upon which the OHV will **primarily** operate during the job activity. Occasional surface changes and variability are known to occur and may be encountered, but the majority of the operation will be completed on the surface type identified. **NOTE: Paved surfaces should be avoided. If the vehicle must be operated on pavement the operator should turn gradually and go slowly.**

### SURFACE CONDITIONS

The condition of the surface upon which the OHV will **primarily** operate during the job activity. Occasional surface condition differences are known to occur and may be encountered, but the majority of the operation will be completed on the surface condition identified.

### SURFACE CONFIGURATION

The **primary** surface configuration known and/or expected to be encountered during the job activity. Isolated surface configuration differences are known to occur and may be encountered, but the significant majority of the operation will be completed on the surface configuration identified.

### LOAD WEIGHT

The **greatest** load weight (as a percentage of the manufacturer's recommended maximum weight) to be carried at any location on the vehicle, i.e., the front rack, rear rack, either axle or both. **NOTE: An OHV may not be loaded in excess of the manufacturer's recommended maximum weight for any location on the machine.**

### LOAD TYPE

The **type** of load to be carried at any time during the job activity.

### ACCESSIBILITY OF USE AREA FOR EMERGENCY RESPONSE

The accessibility of the job activity area for emergency response **at the point most remote** from expected responding emergency medical responders.

### TIME OPERATING VEHICLE

The **amount of time** the same rider will be operating the vehicle in a single workday.

### DISTRACTION POTENTIAL OF OTHER TASK WHILE DRIVING

The **most accurate** description of how distracting a task will be if performed simultaneously while operating the vehicle. e.g., observing animal movements, observing wildfire activity, operating weed spraying equipment, operating drip torch equipment, etc.



## **Appendix C: ATV/UTV Operator – Pre-ride Inspector Checklist**

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**Warning:** Proper inspection may prevent serious injury or death. Failures of controls and other equipment are likely to cause vehicle accidents, and unreliable equipment can leave riders stranded in remote areas and/or under severe conditions. **Always inspect your ATV/UTV before each use to ensure the equipment is in proper operating condition.**

### **T = TIRES & WHEELS:**

- Air pressure is in range stipulated on the tires.
- Tire condition is good, with no significant damage or extreme wear to treads or sidewalls.
- Wheels - Rim bolts/lug nuts and axle nuts are tightened and wheel bearings rotate smoothly.

### **C = CONTROLS & CABLES:**

- Controls & Throttle – Cables are in their proper location; cables, pedals, & switches work smoothly.
- Brakes are adjusted properly and fluid at required level.
- Recoil Start and shifter are operational.

### **L = LIGHTS & ELECTRICS:**

- Ignition switch operates properly and reliably.
- Engine stop switch kills engine.
- Lights function at both front and rear.

### **O = OIL, FUEL, FLUIDS & AIR FILTER:**

- Oil in crankcase is at proper level, with no visible leaks in gaskets or engine casing.
- Fuel tank is full.
- Air filter is clean and not torn or blocked.
- Coolant is full, with no visible leaks.

### **C = CHAIN/DRIVESHAFT, CHASSIS, SUSPENSION & EXTERNAL EQUIPMENT:**

- Check chain slack for free-play and lubrication.
- Drive shaft - Check for oil leaks and missing nuts and bolts.
- Shake handlebars, footrests, racks, etc. to ensure that nothing is loose.
- Check fasteners for tightness.
- Check cargo racks and frame for cracks and broken welds.
- Winches – Check for proper operation of controls, damaged cables, proper fairlead, and hook integrity.
- Tool boxes, liquid tanks, and other external equipment and loaded items are secured and in good repair.
- Trailer hitches are secured and of proper size and capacity.



## Appendix D

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### Fuel Firing Device Requirements

#### Fuel Firing Device Requirements

- All components compatible with diesel and gasoline
- Fuel tank must have a pressure relief (vented tank)
- Wiring, if present, protected from abrasion
- Fuel firing device electrical controls centrally located within sight and reach of the operator
- Fuel shut-off within reach of operator

#### Auxiliary Equipment

- Fire extinguisher
  - Minimum 10 lbs., Type B-C
  - Not mounted on fuel firing device
  - Mounted to be easily accessible

### Operational Requirements

#### Prior to Burn

- ATV/UTV fuel firing device operator should recon burn area prior to ignition
- Perform inspection of OHV, fuel firing device, fire extinguisher, etc. (use check lists)
- Include discussion of OHV fuel firing device operations in pre-burn briefing
- Document OHV fuel firing device use in JHA

#### Firing Operations

- LCES guidelines will be followed during operation. [Lookouts, Communications, Escapes Routes, and Safety Zones]
- The firing boss/ignition specialist will not be a fuel firing device operator
- Change operators as needed to avoid fatigue
- Fueling fuel firing device
  - Turn off OHV and allow to cool
  - Ensure the wick/igniter is completely extinguished and cooled
  - No smoking or open flame within 50 feet
  - Use correct fuel mixture for conditions
  - Do not completely fill tank, fill to about 90% of tank capacity
  - Wipe up any fuel spilled on the tank or the OHV
- Close the fuel firing device fuel valve and extinguish the wick/igniter when not actively firing
- Watch out for fire burning under a lit wick/igniter when the OHV is stopped
- Always use safe firing practices
- Maintain a safe distance between OHVs when igniting
- Maintain continuous communication or visual contact with other operators
- Maintain position and speed during ignition
- Never ignite when another OHV is directly downwind of you
- Never allow ignitions to trap other operators
- In areas with access problems operator should ride in and ignite on the way out
- When the operator dismounts the machine in an active fire area:

- Park OHV in the black or other safe area
- Turn off the fuel firing device, extinguish wick/igniter

### Emergency Procedures

Provide for personal safety first

Stuck, Stalled, or Rolled ATV/UTV

- Halt further ignition
- Extinguish wick/igniter
- Notify others of your situation and request help
- Extinguish fire near machine

Fuel firing device Catches Fire

- Try to extinguish fire
- If practical, jettison fuel firing device and drive OHV away
- If fuel firing device cannot be jettisoned abandon OHV/fuel firing device and leave area immediately
- Notify others of your situation

Fuel firing device Inspection Checklist (Pre-operation)

- Valves
- Filters
- Check all connections, including condition (fuel lines)
- Switches
- Fuel firing device is securely fastened to OHV
- Fill tank
- Pump check
- Nozzle
- Igniter system
- Tank (cap tight, etc.)
- Fasteners
- Snuffer
- Spare fuses
- Wiring and connections

Safety and Auxiliary Equipment Checklist

- Fire Extinguisher
  - Minimum 10 lbs., Type B-C
  - Not mounted on fuel firing device
  - Mounted to be accessible in event of a rollover