Virginia Department of Forestry

Accident Investigation Evaluation Report

ATV Fatality

March 9, 2023

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ACCIDENT INFORMATION

ACCIDENT: All-Terrain Vehicle Rollover Fatality

LOCATION: 1526 Lesters Fork Road, Grundy, Virginia

DATE: 03/09/2023

ACCIDENT INVESTIGATION TEAM

TEAM LEADER/LEAD INVESTIGATOR:

Chad Briggs
Safety/Training Coordinator, Virginia Department of Forestry

INVESTIGATION TEAM MEMBER:

Darwin Rhodes
Forest Technician, UTV Instructor, Virginia Department of Forestry

INVESTIGATION TEAM MEMBER:

Derek Keiser
Water Quality Specialist, ATV Instructor, Virginia Department of Forestry

INVESTIGATION TEAM MEMBER:

Shane Sturgill
UTV Instructor, USDA Forest Service

INVESTIGATION TEAM MEMBER:

Mike Honeycutt
UTV Instructor, USDA Forest Service

EXECUTIVE SUMMARY

On March 9, 2023, a forest technician for the Virginia Department of Forestry (DOF) was involved in a fatal all-terrain vehicle (ATV) accident. He was male, (53) years of age and had been employed by DOF as a full-time employee since Feb. 25, 2015. He had over 20 years of service as a part-time employee prior.

Weather at the time of the incident was as follows:

Class 2 Day

CSI-24

Temperature 63°

Relative Humidity 30%

Wind out of SE at 6 MPH

The victim (forest technician) was dispatched to 1526 Lesters Fork Road, Grundy, Virginia at 16:52 by Buchanan County 911 Dispatch for a wildfire. The victim was already on another wildfire but was dispatching a second crew to handle the Lesters Fork Fire. Control efforts on the fire were begun by local volunteer fire departments (VFDs) at approximately 17:07.

The victim arrived at the Lesters Fork Fire at approximately 17:45, which was already staffed by VFDs and DOF firefighters. This was the victim's third wildfire response that day. After arrival, the victim set out on his DOF-owned Can Am 800 ATV at approximately 18:00. The purpose of which was to scout out for a desirable location to establish a bulldozer-created fire line. After approximately 15 minutes without radio contact with the other firefighters on scene, a search was launched by several personnel at approximately 18:30. The victim's direct supervisor was contacted at 19:21 who then traveled to the scene. Frequent attempts were made to contact the victim via portable radio as the searched continued.

At approximately 19:45, the victim was located lying underneath the overturned ATV in a wooded area at the top of a small ridge between two trees by another DOF forest technician (photo 1.). The DOF technician attempted to free the victim from the ATV but was unable due to the weight of the vehicle. Within a few minutes, a local landowner and a DOF part-time employee arrived at the accident scene. With their combined strength they were able to free the victim and move him a short distance to a roadbed below the accident scene. The victim was wearing a long-sleeve shirt, pants, boots and a radio chest harness. A hardhat was found at the accident scene close to the ATV. The victim was not breathing and had no pulse. At that time, the personnel knew he was deceased.

Additional fire personnel and rescuers were summoned to the scene to assist with victim recovery. Buchanan Sheriff's Office personnel arrived at the accident scene and took over the investigation. The victim was removed from the scene at approximately midnight. Personnel who were initially on the Lesters Fork Fire original dispatch remained on scene until after the victim's body was removed. The victim's body was transported to the Medical Examiner's Office in Roanoke, Virginia.

The Lesters Fork Fire was brought under control at 23:00 and was held at 15 acres. No structures were lost and no other injuries had occurred.

FINDINGS

Finding 1:

The victim was scouting for a desirable location to establish a bulldozer fire line.

Finding 2:

The victim was traveling on an old logging/mining road traveling south to reach the ridge top, with fire located to his left downslope. As he drove up the road, he observed a ridge running to the east above the fire. It is speculated that he thought the ridge would be a good place to establish a bulldozer fire line to hold the fire's progression.

The victim began to ride up the ridge traveling in an easterly direction at a seemingly low rate of speed. This route of travel once reaching the ridgetop was in the woods and not located on any type of trail/road.

Finding 3:

The victim was not wearing a DOT-approved helmet at the time of the accident. Agency policy states the following at the time of the accident:

Head Protection

- *Approved agency-issued helmets are required at all times when operating an ATV as well as a UTV that is not equipped with a roll bar. If an employee feels that it would be unsafe to wear an issued helmet in a particular situation (such as firefighting), then the ATV should not be used. Helmets used for bicycling, skateboarding and rollerblading will not be considered acceptable replacements for approved helmets, nor will hardhats.*
- *When using a UTV that is equipped with a roll bar, the operator may substitute a hardhat for a helmet as long as the chinstrap is secured and seat belts are used.*
- *VDOF will issue approved, properly-sized helmets to staff that are assigned ATVs as well as make them available to staff that use ATVs intermittently.*
- *Beginning January 1, 2007, all new VDOF-issued helmets will be equipped with full chin protection and face shields.*

Finding 4:

After victim removal and subsequent sheriff's investigation, accident scene was not secured, and ATV was removed prior to the arrival of other investigating resources.

Finding 5:

Personnel involved with initial fire suppression efforts and subsequent victim search and discovery were held at the accident scene for hours past the discovery.

Finding 6:

This was the victim's **third** fire response of the day, even though the state's 4PM Burn Law was in progress and no fires should have been lit prior to 4 p.m.

Finding 7:

The actual rollover accident and events leading up were not witnessed by any other person on scene at that time.

Finding 8:

A large, forked tree branch was found on the ground in the ATV's direct path of travel.

Finding 9:

ATV was able to be driven from the scene as there was little to no damage except for scratches and light gouging in the plastic and painted areas. The machine was also found to be in low gear/sport mode with the 4-wheel drive engaged.

Finding 10:

The Can AM 800 ATV was taken to the dealer (Abington Equipment Inc.) for a full mechanical inspection, post-accident. There was found to be no issues or problems associated with the ATV that may have contributed to the accident.

CAUSES

Some causes are of purely speculative nature, since there were no witnesses to the accident.

Cause 1:

Large, forked tree branch elevated off the ground at an angle from 6-26 inches above ground level.

Cause 2:

Victim attempted to drive over an elevated, large, forked tree branch that subsequently caused the ATV front wheels to raise up off the ground.

Cause 3:

Once the ATV front wheels were off the ground it easily climbed a tree while in low gear/sport mode and with 4-wheel drive engaged, the tree was directly in front of the machine on the victim's right side. This caused the ATV to rollover onto its left side, thus trapping the victim underneath.

Cause 4:

The ATV weighed more than 900 lbs. Upon landing on top of the victim, this trapped him underneath. The sheer weight of the machine likely made it impossible for the victim to be able to call for help on his portable radio secured to his chest. This likely caused asphyxiation which was the official cause of death.

RECOMMENDATIONS

Recommendation 1:

Replacing all ATVs with UTVs that possess rollover protection structures, seatbelts and windshields would greatly increase the overall safety of personnel travel in the work environment.

Recommendation 2:

If the agency chooses to continue the use of ATVs, all existing ATVs should be retrofitted with roll cages to protect riders in the event of a rollover accident.

Recommendation 3:

All employees obey current agency “head protection” guidelines listed in the in Agency Policy and Procedure 8-19 Workplace Safety – ATV and UTV Operations.

Recommendation 4:

Agency should follow current policy/procedure for training new employees on the use of ATVs and UTVs and require personnel recertification classes every five (5) years.

Recommendation 5:

Part-time employees need to follow agency policy/procedure and possess an agency or otherwise accepted national riding certification for ATVs/UTVs in order to operate agency machines.

Recommendation 6:

Establish an employee training record database that will list training and certifications for every employee from their hire date through retirement.

Recommendation 7:

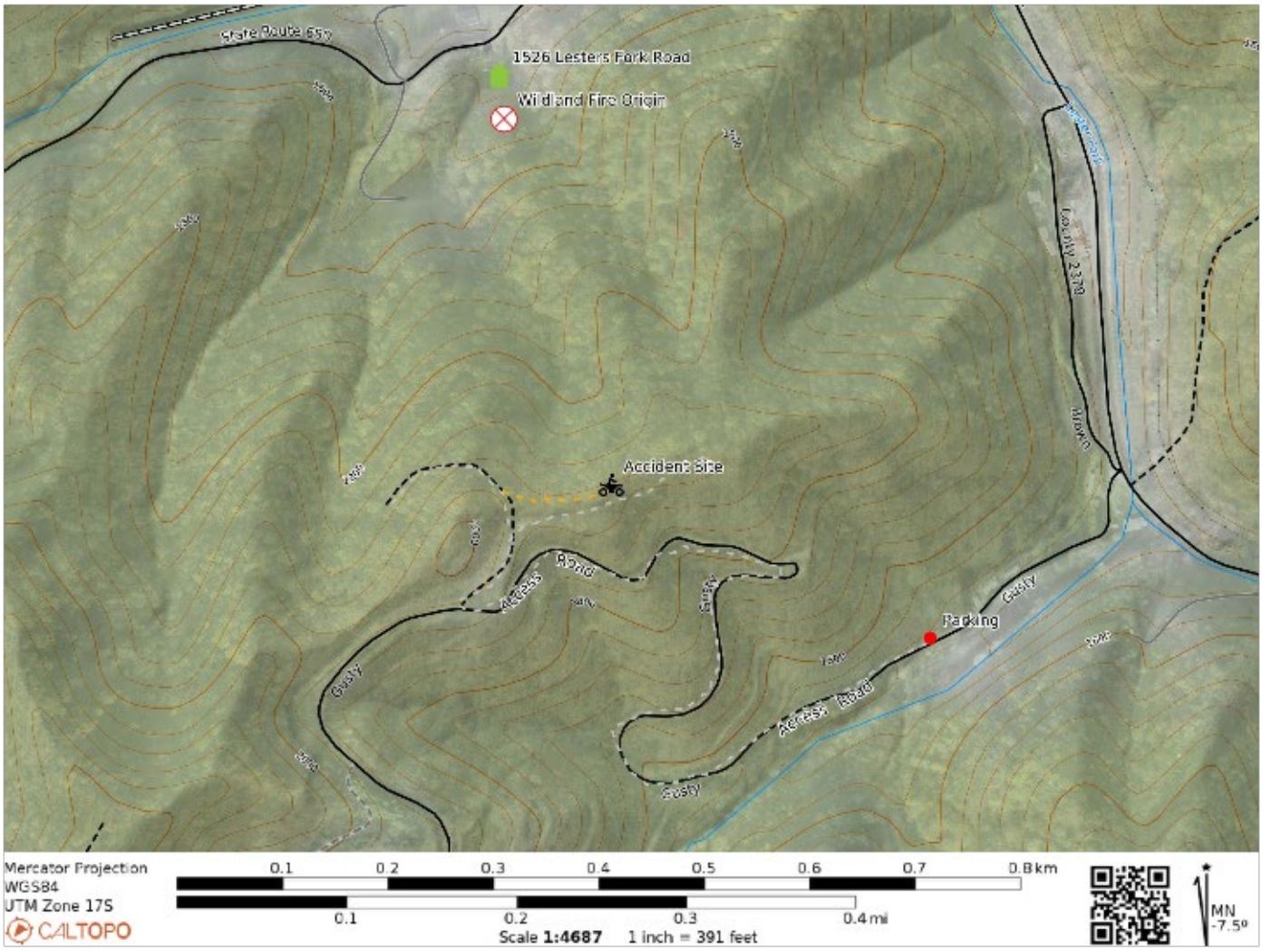
Per agency policy/procedure, ATV/UTV riders should always ride in pairs.

Recommendations 8:

Agency should buy all employees their own U.S. Department of Transportation -certified riding helmet that is fitted specifically for that individual. Spare helmets should be purchased in a multitude of sizes for each region.

PHOTOS

1. Map of accident area.



2. Shows area where victims body was found trapped underneath the ATV.

(Note: ATV has been up righted in this picture contrary to how it was found after accident.)

3. View of the direction of travel of the ATV with view of forked tree near tape measure.

4. View of the ATV against the tree that it is believed to have partially climbed with the right front wheel. This is what is believed to have caused the ATV to overturn.

5. Further views of the tree depicting gouges in the bark illustrating where the ATV is believed to have climbed.

6. Further views of the tree depicting gouges in the bark illustrating where the ATV is believed to have climbed.

7. Further views of the tree depicting gouges in the bark illustrating where the ATV is believed to have climbed.

8. Views of the forked tree branch position and approximate height encountered by the victim while scouting for placement of bulldozer line (red flags show track marks in leaf litter). These tracks are in accordance with the direction of travel of the victim on the ATV.

9. Views of the forked tree branch position and approximate height encountered by the victim while scouting for placement of bulldozer line (red flags show track marks in leaf litter). These tracks are in accordance with the direction of travel of the victim on the ATV.

10. Views of the forked tree branch position and approximate height encountered by the victim while scouting for placement of bulldozer line (red flags show track marks in leaf litter). These tracks are in accordance with the direction of travel of the victim on the ATV.

11. Side view of the forked tree branch and its approximate height encountered by the rider.