

Rapid Lesson Sharing

Event Type: ATV Training Accident with Injuries

Date: June 3, 2021

Location: Chugach National Forest,
Seward Ranger District

*Student 1 was in the middle of the pack
as they approached a right-hand turn into the first switchback
and lost control, rolling the ATV to the right—pinning Student 1 underneath.*

Lessons Learned from this ATV Training Accident

Background

Leading up to the summer 2021 field season, the Chugach National Forest offered employees several ATV operator training sessions. These three-hour hands-on training sessions are meant for employees who are required to use ATVs during official duties to accomplish field work.

All sessions were taught by a U.S. Forest Service employee who holds an ATV Instructor certification card (since 2015) from the ATV Safety Institute (ASI). These sessions, offered each spring, include a “new rider training” course as well as a “recertification” course for more experienced riders who have previously been through this training.

The training session held on the afternoon of June 3 was conducted at the Kenai Lake Work Center on the Seward Ranger District. It was geared toward more experienced riders seeking an ATV refresher course.

Current Forest Service directive states that ATV refreshers be conducted once every three years. The first segment of the training (Phase 1) includes machine orientation, PPE, JHA review and basic riding skills demonstrated by the instructor. The students then perform and practice specific skills on a controlled range. The second segment (Phase 2) of the training includes a trail ride to gain practical experience, demonstrate proficiency and further build skills and confidence with safe ATV operations in a trail environment.

It was during Phase 2 that this ATV accident occurred.

ATV Training Students Complete Phase 1, Proceed to Phase 2

Student 1 and Student 2 arrived shortly after the time scheduled for the experienced rider session. Student 1 therefore missed the morning “new rider training” session. However, even though Student 1 had not been previously certified to use ATVs for the Forest Service, they did have some experience with ATVs growing up on farmlands and in the woods of Ohio.

After conducting an initial assessment of all six students, the instructor therefore decided to adapt the afternoon “new rider” certification course to accommodate this new Forest Service ATV student with some skills from the “new riding training” rather than tell them that they couldn’t attend.



U.S. Forest Service employees participate in ATV training on the Crown Point Mine ATV Trail on June 3, 2021.

After Phase 1 was completed, the instructor and students proceeded to Phase 2 which included: skill building on flat ground, navigating obstacles, climbing and side-hilling, followed by a ride up the Crown Point Mine ATV Trail.

This is a typical ATV trail managed by the Forest Service as a Class III ATV Trail with maximum grade not to exceed 30 percent. This trail includes switchbacks, short and steep climbs/descents, and loose rocks. The trail was mostly dry this day, although there were large puddles in low spots and snow on some parts of the trail. Student 1 did note that *“after the fall, my clothes were pretty soaked in mud and water.”*

Descending Trail, Student 1 Loses Control—Rolls ATV

The class was comprised of seven total ATVs, one for each student and one for the instructor. They ascended the trail without issue, turned around at the top and started descending the trail back to the Work Center. Student 1 was in the middle of the pack as they approached a right-hand turn into the first switchback and lost control, rolling the ATV to the right—pinning Student 1 underneath.

The instructor and another student were directly behind Student 1 and immediately extricated the student from underneath the ATV. One of the students was Wilderness First Responder (WFR) qualified and the instructor had basic First Aid/CPR training. During the initial injury assessment, Student 1 reported that they “blackened out” and felt shaken up. The student had a sore lower right leg. A small blood stain was visible on their pant leg.

A more detailed assessment discovered a deep laceration/section of skin missing on the shin approximately ½” by 1” in length, accompanied by swelling. The laceration was patched-up on scene using an improvised bandage.

While there was no visible damage to the ATV, as a precautionary measure, the student and instructor swapped ATVs for the approximate two-mile ride back to the Work Center. Upon arrival at the Work Center, the improvised bandage was removed, the wound cleaned, and a new bandage applied. There was also a visible cut/scrape on Student 1’s right elbow and Student 1 also had a sore upper left arm.

Student 1 Admitted to Hospital Overnight for Treatment and Observation

The instructor advised Student 1 to keep an eye on the injuries and to seek medical treatment if needed. Upon finishing the training and driving back to Anchorage (as the passenger) with Student 2, the leg became more painful and swollen.

Based on this increased pain/tenderness and a pre-existing medical condition, Student 1 and 2 drove to Providence Alaska Medical Center in Anchorage to receive more advanced medical care. Student 1 was admitted overnight for treatment and observation and was discharged the following afternoon to return home to Fairbanks via a commercial flight.

Successes

- ❖ The instructor and fellow classmates provided timely first aid at the scene and were able to egress out of the field safely and successfully to provide follow-up care at the Work Center.
- ❖ Student 1 and Student 2 made the timely and appropriate decision to seek advanced medical care based on the serious nature of the leg contusion, a suspected head injury, and the pre-existing medical condition.
- ❖ Once in the hospital, the employee received exceptional medical care and support from coworkers and their supervisor during and after an overnight stay in the hospital.
- ❖ The ATV instructor holds a current ATV Instructor certification card (since 2015) from the ATV Safety Institute (ASI), the gold standard for ATV instruction within the agency.

Lessons

- ❖ As an agency we should recognize and accept that there is risk in training our workforce. We need to ensure that the benefit outweighs the risk and that the tool (ATV, chainsaw, firearm, aviation, snowmobile, etc.) is necessary for the employee to carry out their normal every day duties.
 - Local units should be open to exploring different ways to complete a mission while accepting a lower risk.
 - We should not be exposing employees to these tools if they cannot/will not maintain some level of proficiency during their normal duties.
- ❖ Look for opportunities to match the training environment with the actual work environment.
 - Example: If ATVs are to be used only on maintained dirt roads for the scope of one's work, training on steep, rocky ATV trails is likely not necessary.
- ❖ Students and instructors must confirm proper-fitting PPE, such as helmets. Ideally, students will bring a pre-issued, properly-fitting helmet to training as this is considered *personal* protective equipment.
 - In this incident, an ill-fitting helmet may have been a factor in Student 1 losing control and subsequently losing consciousness in the wake of the crash.
- ❖ If a head injury is suspected (loss of consciousness), do not allow a student to operate mechanized equipment until checked-out and cleared by a medical professional. The key takeaway/lesson here is in any ATV crash, regardless of whether the occupants are wearing helmets, suspect a head injury.
- ❖ Local units and staff groups should conduct a comprehensive examination/inventory of the number of employees who require the use of ATVs to perform their job and build a training cadre commensurate to support the training needs.
 - The Chugach National Forest used to have four ATV instructors to share this annual training workload. The Forest is now down to one Supervisor's Office employee conducting all ATV trainings for both the Seward Ranger District and Glacier Ranger District, in addition to Supervisor's Office employees, State and Private Forestry and the Forest Sciences Lab employees. More instructors are needed to provide a greater distribution of the workload.
 - The ATV training workload was exacerbated by COVID. All ATV training on the Chugach National Forest was deferred during the 2020 field season, thus creating a backlog in 2021.
- ❖ Provide an assistant instructor to help with student management.
 - In this incident, because the experience levels within the group spanned from novice to expert, a second instructor would have been beneficial. With a second instructor, the group could have split-up based on ability and comfort with what could be viewed as a technical ATV trail.
 - A second instructor can also slow the pace of the class down and allow students more opportunity to voice concerns in a loud, face-paced environment.
- ❖ Ensure that it is broadly communicated well in advance that there are two different levels of trainings based on a student's prior experience and certification level.
 - Better pre-course communication will allow ample time and opportunity for students to communicate directly with the instructor prior to the class.

- ❖ Ensure novice riders and those who have not previously been through a Forest Service ATV training attend the “new rider training” course.
 - This is the critical time to gain familiarity with the machine, practice specific skills, and subsequently put those skills together during a practical trail ride.
 - ❖ Forest Service ATV training should cater to the least experienced rider to teach basic riding skills and build proficiency and confidence with ATV operations.
 - While Student 1 had prior ATV experience, they had not operated a manual shift ATV prior to this training. Student 1 believed that the speed at which they were traveling throughout the training was *“too fast for a training course”* and they *“felt pressured to keep up with the group”*—which exceeded Student 1’s comfort level.
 - ❖ If an ATV instructor determines that a student is not ready for a course (or portion of a course), they should make alternate training arrangements or sideline the student.
 - ❖ ATV instructors should “set the tone” at the beginning of trainings and develop a plan for how to communicate during the trail ride/training in a loud environment while helmets are on. This will help to give a voice to the more-timid or less-experienced riders during the course.
 - ❖ A first aid kit and communication device (Forest Service radio or Sat phone) should always be carried by ATV operators (as per Forest Service directives) and the instructor in the event either are needed during an emergency.
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This RLS was submitted by:

**Graham Predeger
Chugach National Forest
Acting Safety and Health Manager**

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