



# Interagency Aviation Lessons Learned



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**Subject: Fire Boss Scooping Operations**

**Area of Focus: Mission Focus**

**Distribution: All Fire and Aviation Operations**

**Discussion:** Last year, two AT-802F Fire Boss aircraft were involved in three separate mishaps (two accidents and one Incident-With-Potential) while supporting fire suppression operations in Alaska. In this Lessons Learned, we will discuss one of them.

After performing a thorough reconnaissance of a river near the fire and determining that it was unsuitable for scooping, the pilots located a small lake, approximately 2000 feet long and 650 feet

wide, about 4 miles north of the fire. The pilots determined that the lake was free of obstructions in the water and on the approach end of the lake. There was however, a small hill roughly 20 feet in height located at the departure (east) end. While departing with load number 12, the mishap aircraft impacted the hill with the left float. The pilot was able to continue the departure and climb to altitude where he could assess the aircraft's condition. When the pilot began to smell fuel in the cockpit, he elected to divert and land at an airport located approximately 14 miles west of the fire.



## **Factors influencing the mission.**

While enroute to the fire, the pilot was monitoring the air-to-ground radio frequency and heard the firefighters voicing concern about their gear being too close to the fireline. Rather than aborting the scoop that resulted in this accident, the pilot admitted to allowing his eagerness to help the firefighters influence his decision to continue with the scoop despite the increased weight and reduction in remaining takeoff distance. Although the accident occurred on the 12th scoop in the same lake, the pilot stated that he was operating under a self-imposed sense of urgency.

The winds were initially out of the east at approximately 25 miles per hour but decreased to approximately 10 miles per hour toward the end of the flight. Effectively, a headwind loss of 15 miles

per hour increases the distance required to accelerate to takeoff speed, thus requiring a greater distance to clear an obstacle. The pilot stated that, “in retrospect, I should have decreased the size of the load when the wind speed started to diminish.” The reduction in the headwind had an adverse effect on the climb performance of the aircraft with the amount of water (weight) onboard which contributed to the aircraft impacting the terrain.

The “go/no-go” point is a point during the scoop at which, if not airborne, the scoop should be aborted and the load jettisoned. It is imperative to not continue scooping past the go/no go decision point if things aren’t proceeding as planned or if conditions change. The pilot stated that, “in retrospect, I should have... jettisoned the load earlier, at the go/no go point.”

### Lessons Learned.

1. Wanting to help is admirable - but be aware that a sense of urgency can negatively influence sound aeronautical decision making. Additionally, the loss of an airborne firefighting asset can be a serious detriment to the firefighters on the ground.
2. Procedures are in place for a reason - the go/no-go point is there to ensure aircraft possess adequate flying speed and climb performance to takeoff safely. Aborts should be practiced in a controlled training environment to ensure proficiency.
3. Maintain vigilance – conditions can always change and operating in austere environments require pilots to constantly monitor and update their performance requirements. What worked in one event may not in the next, especially if conditions have changed.

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