



FLORIDA FOREST SERVICE

Crane Island Fire

FACILITATED LEARNING ANALYSIS (F. L. A.)

May 14, 2017



Team Members

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Narrative

On May 14, 2017, in-district and out-of-district crews returned to the approximately 4,000 acre Crane Island Fire from the previous day. The fire was located about 20 miles West of Lake Okeechobee, Florida. The strike team began their assignment the previous operational period in an adjoining district and were reassigned to the Crane Island Fire on the late afternoon of the 13th. The crew had worked a 21 hour shift the previous operational period and returned on May 14th after a five-hour break in service. The fire was managed with two divisions, left flank and right flank. Incident Commander (IC), Okeechobee-4 (OK-4), took the right flank with four type 2 tractor plow units and Tallahassee-3 (T-3) an out-of-district Strike Team Leader (STL), took the left flank with three type 2 tractor plow units. T-3 is a fire supervisor with 26 years of experience. The fuels were a mixture of grass pasture, flag ponds* and cabbage palm hammocks with 70% or more being grass pasture land.

The observed fire behavior that day was torching in the hammocks, 10-foot flames and some spotting. The 20-foot wind speeds were predicted at 8 to 9 miles per hour; however, observed wind gusts seemed stronger.

The left flank tractor plows were given the instructions of plowing three firelines and cleaning out the firelines from the previous day. Instructions were clear and no one communicated any issues with the assignment. The left flank tractor plows had finished working a spot over on the south end and were on the way to another spot over on the north end approximately a mile away. The three tractor plows began to separate gradually as T-89, a John Deere 650H, was repeatedly closing field gates behind them to prevent cattle from getting loose. The T-89 operator was a Forest Ranger with ten years of experience and considered himself very skilled with his equipment. The T-89 operator is from North Florida with little exposure to the South Florida fuels.

After a lunch break, as the three tractor plows moved toward the north end of the fire, Florida Forest Service fixed-wing aircraft (FOR-59), advised of another spot over south of their location adjacent to the fire perimeter. The pilot of FOR-59 has 17 years of experience as a fire pilot and was very familiar with the terrain and fuels. T-89, the closest unit to the spot over, was

directed by T-3, to return to contain the spot over. FOR-59 described the spot over as 5 acres in grass moving towards a hammock, advised one tractor can handle and that a helicopter was available. T-3 also sent the next closest tractor plow, still over a half mile away, to back up T-89.

T-89 began on the left flank of the spot over and worked his way around once. T-89 realized that this fuel type, flag pond was clogging his plow. The plow clogged after 20 to 30 yards and the unit was merely pushing down the vegetation and not cutting an effective line. Upon going around the spot once, T-89 made attempts to unclog his plow by raising and lowering it and moving backwards. After clearing it mostly, he began back around the spot over to encompass it once more.

*Flag Pond is a shallow indentation in the terrain that often contains a mixture of grasses and herbaceous weeds growing in soil with heavy organic matter content. These ponds hold surface water when water tables are high and at other times are dry (See Fig. 1).



Figure 1

T-89 completed a second pass (See Fig. 2). FOR-59 advised that the lines seemed to be holding on the flanks. T-89 decided to attempt a third pass because the fireline was not to bare mineral soil and the walking down of the vegetation with the tractor and plow seemed to be working. T-89 began his third pass. The tractor became immobilized by vegetation being pushed along underneath the tractor and became high centered (see Fig. 3). T-89 immediately advised over the radio that he was stuck. T-89 was still on the left flank but nearer the head of the spot over.

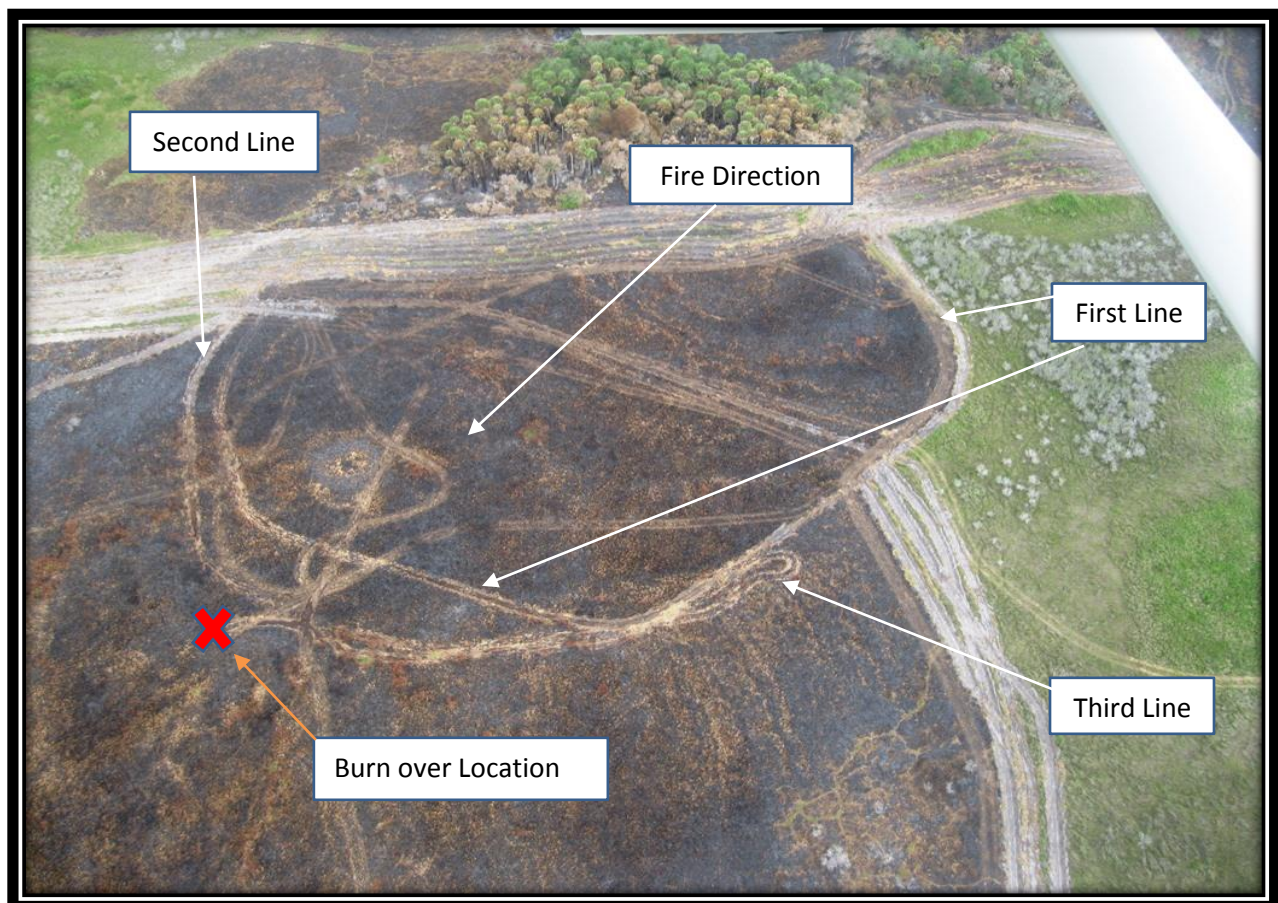


Figure 2

T-89 Ranger was calm and very collected over the radio. The fire front was approximately 30 yards away. T-89 Ranger initially thought about leaving the tractor plow however, the vegetation type and poor visibility due to smoke caused him to make the decision to stay with the equipment. Fire behavior was described as moderate with ten foot flames driven by the winds. T-89 Ranger declares over the radio that “burnover is eminent!” EMS was initiated immediately due to remote location and difficult access. T-89 began to go through the “Tractor Abandonment Checklist”.



Figure 3

In preparation for the passing of the fire front, T-89 Ranger activated his tractor protection system for the belly pan. He ensured all his PPE was donned, exited the cab, and began to wet down the left side of the tractor; the right side was too hot at that moment. Seminole 614, a local type 3 helicopter, made an initial bucket drop on T-89 before the front arrived. The smoky conditions forced the operator back inside the cab of T-89. The fire front passed over T-89.

When the fire front passed, FOR-59 asked if another drop was needed and the operator said, "yes". Seminole 614 made another drop on T-89 because the operator wanted to ensure no materials

on his unit were still burning before he exited the cab. Upon exiting the cab, the visibility had improved and he began to wet down the unburned materials around the proximity of the tractor. This entire time, T-89 maintained excellent communication over the radio advising his steps taken as the situation unfolded. Other operators maintained silence over the channel allowing for good communications with the endangered operator.

The backup tractor plow arrived 3 minutes or so after the fire front had passed and aided T-89 in freeing his unit. T-89 and Ranger were brought back to the roadside and placed out-of-service the remainder of the operational period.

Contributing Factors

- ✓ Unfamiliar with local Terrain (Flag Pond)
- ✓ Inadequate rest break (from previous operational period)
- ✓ Increased Fire Behavior
- ✓ Non-effective control line
- ✓ Clogged plow

Lessons

- ✓ Adhere to FFS work/rest policy 235.013
- ✓ During periods of high to extreme fire behavior conditions, use multiple units or adjust tactics until additional units arrive
- ✓ Operators should allow adequate time for a thorough size-up before taking suppression action
- ✓ Ensure briefings include local hazards, fire activity and terrain.
- ✓ Following the Dutch Creek protocol, Initiate EMS response early when in remote location.



Water in Fire Lines

Conclusion

When dangerous fire conditions exist, operators must place extra emphasis on their safety. As this event occurred, the operator remained calm, implemented steps to protect himself and his equipment, and communicated with others until the fire front passed. These actions directly contributed to a successful outcome and provides a model for others to learn from.

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