



Burning Stump Fire Review

Purpose

To facilitate objective after-action reviews of significant wildfire responses carried out by Virginia Department of Forestry personnel and maximize learning opportunities that increase safe and efficient emergency operations across the organization.

Incident Details

Name: Burning Stump
Fire Number: SUF21004
Size: 40 acres
Date: 4/27/21-4/29/21
Location: 36° 44' 04.9", -76°41' 15.94"
Personnel: Rose(IC), Jasenak, Tindell, Bachman, Bassett, Tuck, Hisghman, S. Coleman
Weather: Class 2, CSI: 145, SE 20mph, 80F, 31% RH
Fuels: mixed timber leaf litter, grass, brush
Topography: coastal plain, <5% slopes
Number of Personnel (max): 8 full-time VDOF and 0 part-time firefighter man-hours
Equipment Utilized: Dozer (2), Single engine air tanker (SEAT)

Personnel Present for the Review

Rose, Hisghman, Bays, Bronner, Burke, Bachman, Bassett, Tindell, Coleman, Tuck, fire staff: Miller, Turck, Houttekier, and Suffolk Fire and Rescue

General Narrative

The Burning Stump fire was reported on Tuesday, April 27, 2021 at 1313 hours in the area of 3808 Deer Path Road in the City of Suffolk. Local initial attack forces from the agency and Suffolk Fire Department started control work 22 minutes later at 1335 hours. According to the Incident Commander : **"VDOF fought a fire at same location on April 9, 2017. I was a little familiar with the lay of the land. Fire spread was aggressive and concerns with homes along Indian Trail."** Additional resources were ordered to achieve containment and control of the fire. From the report: **"Tuck (regional fire specialist) was contacted and I requested a drone and for her to see if air support was available. Suffolk FM & PD started home evacuations of 3475-3857 Indian Trail."**

The Burning Stump fire was under control that same evening at 1812 hours.

The Incident Commander requested both drone and aerial suppression assistance of rotor-wing aircraft. This was due to the weather conditions, knowledge of the area due to a fire in the past, proximity of the fire to occupied structures (homes), reports of the first fire department units on scene of rapid rates of spread, hearing radio traffic concerning active home citizen evacuations, and potential fire behavior based upon fuels characteristics and weather conditions. According to the IC from the fire report: **"Fire spread was aggressive and concerns with homes along Indian Trail."**] The aerial support availability request was made through the

regional office (protocol) by the IC and included the regional fire specialist. The regional fire specialist contacted the Fire and Emergency Response (FER) branch for filling the request. Rotor-wing aircraft were not available in a timely manner so the FER branch contacted the agency's contract Single Engine Air Tanker (SEAT) pilot to check for availability for the mission. The pilot was at his home base airfield at the time and accepted the mission. This information was relayed back down the chain to the IC. The decision was made to launch the SEAT and the FER branch called the IC direct to go over the use of aerial suppression resources including: air-to-ground frequency, setup of closest tactical airport water supply, and use of the air asset for suppression and reconnaissance. Agency bulldozers were engaged to install fire control lines using natural barriers where applicable. STARS radio traffic indicated effective use of the first water drop from the air tanker by cooling the fire where it was most active. In total, 4 airtanker loads were used to help control the fire in coordination with ground forces on the Burning Stump fire, totaling approximately 2,000 gallons of water delivered.

Significant Challenges to Control

The months of March and April are a critical time in the southeast in terms of elevated wildfire occurrence probabilities absent late winter/early spring rainfall. Higher occurrence of typical weather patterns of low relative humidity and elevated wind speeds are common. These factors all present challenges to control of wildfires in the state of Virginia. High water table and low-lying area (swamps) routinely present significant challenges for agency firefighters in the coastal plain of Virginia. Oftentimes dozer use is limited due to these factors.

Access to the parcel of land consisted of a county road system and an abandoned railway bed.

Area(s) for Agency Improvement

1. Consider a written policy change for the agency that addresses the issue of increased use of unmanned aerial devices and the combined use of aerial suppression and recon resources. These conflicts have occurred on two major wildfire incidents in the spring of 2021 and the author estimates that this will continue to be a more prevalent challenge due to the rapid deployment of this technology across multiple emergency response agencies across the state.

Significant Events during Operations

1. Multiple homes threatened along Indian Trail Road.
2. Local law enforcement conducted citizen evacuations during response activity to the incident.
3. Utilization of a contract Single Engine Air Tanker (SEAT) for fire attack and reconnaissance.
4. The suppression aircraft was on-scene more quickly than anticipated and there was ongoing drone use by Suffolk Fire Department. This created a stressful situation for the VDOF incident commander and posed a serious safety conflict with the suppression aircraft in the airspace.

Recommendations for the Future

1. Reinforce the directive to all agency responders the importance of preventing aerial operations conflict between manned and un-manned aircraft on incidents. Effective interagency communication is key within the unified command structure.
2. The Fire and Emergency Response branch supports empowering our personnel in making decisions for more resources rather than fewer if in doubt where significant values at risk are in proximity of wildfires.
3. Continue to order supplemental personnel in a timely manner, from within or outside the region as necessary, to assist with fires such as the Burning Stump.
4. Maintain the integrity of our role in fire investigation and cost collection through civil statutes as mandated by the Code of Virginia.

5. Consider delegating the responsibility of aircraft coordination (including drones) to a VDOF firefighter other than the incident commander on-scene *where staffing allows*.

Closing Comments by Fire Staff

Overall, the Burning Stump fire was managed well by local forestry personnel in challenging weather and fuels conditions. The unified command structure was utilized effectively. The Burning Stump fire presented our responders with a higher complexity than a typical incident due to the combination of the proximity to structures to the fire, active evacuations of citizens from the area, and use of multiple aerial assets at the same time. Firefighter and citizen safety were a priority consideration in decision-making. Regional staff did not delay ordering inter-regional personnel to assist with the fire.

The primary issue that needs to be addressed is ensuring safe air operations by avoiding the likelihood of airspace conflicts in the future. Suffolk Fire Department was invited to our agency review to cover this subject. Through this process, consensus was achieved by all parties to ensure safe aerial operations going forward. Ultimately, VDOF fire staff will work to develop agency standard operating procedures to guide the safe operation and control of UAVs on agency incident scenes.

Local VDOF firefighters performed in adherence to agency historical fundamentals of safe and rapid initial attack to wildfires. No injuries to responders or citizens occurred. Improved property sustained no damage as a result of the Burning Stump fire.

John Rose	06/14/2021
Incident Commander	Date
David J. Houttekier	06/15/2021
Fire Staff Representative	Date