



El Paso County, Colorado Sheriff's Office

Black Forest Fire Investigation Executive Summary 13-7655

Summary Report Prepared
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Black Forest Fire Investigation Summary

INTRODUCTION

On June 11, 2013, at approximately 1:45 p.m., a report of smoke in the area of Shoup Road and Highway 83 was reported and local fire suppression personnel responded to the area. The fire was located in the Falcon Forest Subdivision in an unincorporated area of El Paso County known as Black Forest. Existing weather conditions included an air temperature of 95 degrees, a relative humidity of 4 percent and a wind speed of 23 m.p.h. with gusts as high as 40 m.p.h. A defined smoke column was reported by responding firefighters while still over two miles away.

Responding fire personnel started an initial attack on the fire in a general area bounded by Shoup Road on the south, Falcon Drive on the west, Peregrine Way on the east and Darr Drive on the north. Fire and law enforcement personnel began evacuation of neighborhoods north of Shoup Road within the first hour. Initial Attack Incident Command was established by the Chief of the Black Forest Fire/Rescue Protection District and was subsequently turned over to the El Paso County Sheriff's Office who in turn delegated authority to the Colorado Division of Fire Prevention and Control. By the evening hours, a Type I Incident Command Team had been ordered.

The fire burned with extreme intensity the first two days, running primarily eastward the first day and then northward the second, and was declared 100% contained on June 20, 2013, after burning an estimated 14,280 acres with estimated suppression costs of about \$9.23 million. Insured losses exceeded \$420 million. The fire, now known as the Black Forest Fire, destroyed 489 homes and took the lives of two residents when they were trapped while trying to evacuate on the first day as the fire overtook their home.

INVESTIGATION METHODOLOGY

Colorado statutes mandate that the Chief of every fire protection district shall cause any fire in his district to be investigated. The El Paso County Sheriff's Office, by agreement, performs this function for the majority of fire protection districts in El Paso County. Given the potential for a criminal cause of the fire, the loss of life in this fire created an added dimension to the investigation in that it became a homicide investigation with the potential for criminal charges including the crime of Murder. Any such investigation is handled by the El Paso County Sheriff's Office using any and all resources available to ensure a thorough investigation.

The investigation of a Wildland fire is based on scientifically established techniques in the examination of fire indicators, an understanding of Wildland fire behavior, interviews of responders and other witnesses, and the forensic examination of any related physical evidence. Methodology includes not only attempting to locate causes of the fire but also the elimination of any other

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potential causes. Personnel involved in any origin and cause investigation on a Wildland fire scene must be trained in this specific type of investigation and work through a peer review process. These investigators receive extensive training in Wildland fire behavior, suppression techniques and specific training on the investigation of this type of fire in courses to include the FI-210 “Wildland Fire Investigation” course sanctioned by the National Wildfire Coordinating Group (NWCG). This course includes both classroom and field training as well as a required peer review of the investigator’s experience.

Scene Investigation

The investigation into the origin of the fire was commenced by EPSO fire investigators within the first 24 hours of the fire. This included the collection of all 911 calls reporting the fire, identification of first responding firefighters and preservation of meteorological observations for the time of the fire from local weather data collection stations and the National Weather Service, as well as extensive photo documentation of the area of the fire origin.

Given the known devastation of the fire at that point, an Investigation Team was formed consisting of recognized experts in the area of Wildland fire investigation from agencies including the USDA Forest Service, the Aurora Fire Department, the US Bureau of Alcohol, Tobacco, Firearms and Explosives (ATFE), the 4th Judicial District Attorney’s Office and others. This team was assisted by surveyors from the El Paso County Public Services Department. Law Enforcement established scene security and prohibited entry into the general area of origin to protect the integrity of the area for the investigation team. Scene investigators interviewed fire suppression personnel who worked the general area of origin on the first day of the fire and recorded their observations of the fire’s behavior and location. A systematic examination was then conducted to identify the macro and micro indicators and map their locations.



The progression of a Wildland fire results in identifiable macro and micro indicators including burn patterns, “freezing” of vegetation in wind blown positions and other fire artifacts that are used by investigators to backtrack the progression of the fire to the area where the fire originated. The investigation then focuses on that area of origin to identify the ignition source. Approximately 223 such

indicators were identified, surveyed and catalogued. These indicators were analyzed and used to determine the area where the fire originated.

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A secondary team was subsequently formed by personnel of the USDA Forest Service to conduct an independent investigation of the area of origin. This second team worked alone, without any interaction with the other investigators, observing fire pattern indicators to determine the area of origin. After conducting their independent examination of the burn area, they identified an area of origin that matched the origin location identified by the primary team. This entire process was conducted in a systematic process and took several days. The process was complicated by the fact that it was determined that the area had burned twice, the first time being a low intensity fire that burned near the ground outward from the origin, and a subsequent higher intensity burn that was blown back through the same area higher in the trees.

Once the origin of the fire was established, the investigation shifted to determining what the ignition source was. Part of this process included the elimination of potential causes. The origin was in a wooded draw with no man-made structures or utilities in the immediate vicinity, ruling out power lines, railroad activity, gas leaks, or any other typical source with a fixed location. All lightning activity (117 strikes) for the days prior to the fire was examined finding no lightning strikes near the origin, the closest strike being more than three miles away. There were no mulch or hay piles that could have suffered a spontaneous combusting reaction. Computer modeling of the local topography, meteorological conditions and fuel types was conducted by a Fire Behavior Analyst to determine what the fire behavior would have been during the early stages of the fire and determine the probability of ignition from various potential causes. All natural causes were ruled out.



The investigators started an extremely intensive examination of the area of origin. A grid pattern was established and a five step process was used to



examine the scene. During this search, the only foreign items found were some metallic particles which were collected for testing. The conclusion based on this evidence is that the metallic particles could have been the source of ignition, or associated with the source of ignition. Analysis was conducted on the particles as well as on potential sources for the particles including gas powered tools, tractors, vehicles, chimneys, etc.,

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from the local area. Wood cutting had been done in the area using gas powered tools and vehicles. Other residents had used their fireplaces. Analysis was performed by the San Dimas Technology and Development Center, the ATFE Forensic Laboratory and the FBI Laboratory. The examined gas powered items and any associated spark arresters on them were examined and found to be in normal operating condition and none could be identified as the source. Forensic laboratory tests to positively identify the origin of the metallic particles were inconclusive.

The only clearly established fact was that no natural causes existed and thus the fire was human caused. A potential cause associated with the metal particles can not be ruled out, or positively identified. A potential cause associated with an intentional ignition is not supported by the evidence or circumstances, but can not be completely ruled out. The origin of the fire is in an area that is not readily accessible from a roadway, allowing an easy escape, as is typical in intentionally set Wildland fires. There was no evidence of any other miscellaneous cause such as blasting, fireworks, welding, target shooting, etc.

Expanded Investigation

The associated investigative work began at the same time as the scene investigation. Detectives interviewed anyone who lived near the origin of the fire, gathering their background, their activities in the days leading up to the fire, as well as their observations. Photos and video were collected consisting of home surveillance video, snapshots from game cameras, as well as photos of the fire taken by witnesses. Initial responding firefighters were interviewed. They provided key information about where the boundaries of the fire were at various times, the fire behavior at different locations, as well as scores of personal photographs that some of them recorded. Aerial photography of the entire burn area was recorded with extensive photography of the general area of origin. Each neighboring house was examined along with any tools or equipment that could have been capable of causing a spark or significant heat. Many items were collected and parts were sent off to laboratories to conduct forensic examination of key parts.

As is typical with any event of this size, numerous tips and suggestions were provided to the Sheriff's Office suggesting other possible causes or scenarios. Approximately 244 additional leads were eventually followed up on by detectives. This was a time consuming process to evaluate the validity of each reported tip along with it's significance. Each was investigated fully and documented. Unfortunately, none provided definitive evidence of how the fire started or who was responsible.



The complete documentation of the scene investigation, interviews, associated documents and reports, photographs and video, and reports submitted by assisting agencies, completely filled eight case binders.

Review

Upon the completion of the investigation, the entire case was reviewed by the Sheriff's Office Investigations Division and the District Attorney's Office to determine if any additional leads remained. It was the determination of the El Paso County Sheriff's Office and the District Attorney's Office that there was not sufficient evidence to warrant criminal prosecution at this time. None of the investigation or forensic examination supported any one possibility to the extent needed to pursue criminal charges. Additionally, no additional recommended follow-up work could be identified at this time.

While the investigation is considered complete at this time, additional investigation can and will be conducted in the future should additional credible information or evidence be found. It is the intent of the Sheriff's Office to continue to seek any further information that may someday provide definitive answers as to how the Black Forest Fire was started and who was responsible.