	evious Luttoris are obsolete	Case/File Number	
	REPORT OF INVESTIGATION (Reference FSH 5309.11)		
Controlling Office	Investigating Office		
R-5 – Law Enforcement and Investigations	R-5 – Sierra National Forest		
Case Type Investigative Period			
Fire	From: September 4, 2020 To: Ma	ay 25, 2021	
Case Status	Report Type		
Closed—Solved	Final		
Case Name	Investigated By	-	
Creek Fire, SNF	Special Agent OO & O/V.		

SYNOPSIS

On September 4, 2020, at approximately 1818 hours, Fresno County Sheriff's Dispatch received a 911 call indicating there was a fire in the area of Big Creek, CA near Camp Sierra. Additionally, the fire was called into the Sierra National Forest Dispatch Center at approximately 1833 hours by a Fire Prevention Technician stationed in Big Creek.

The Creek Fire originated just south Big Creek drainage, west of Camp Sierra and north of Huntington Lake Road, on the Sierra National Forest, within the Eastern District of California, Fresno County. The Creek Fire burned 379,895 acres, destroyed 853 structures, and damaged an additional 64 structures.

To date, investigators have exhausted all available leads and resources in an attempt to identify subject/s that were in the vicinity of the Creek Fire origin prior to and shortly after the fire was reported. At this time, no subject/s have been identified. Based on the above facts, along with the fact that no physical evidence was located to support any other fire cause categories as the probable cause of the Creek Fire; investigators have determined that lightning is the probable cause (see exhibit 30, Creek Fire Origin and Cause Report).

Future leads or information obtained related to the cause of the Creek Fire may result in a change of this conclusion.

Case considered closed, pending further leads.

Distribution	Prepared By: b6 & b7C	Digitally signed by b6 & b7C Date: 2021.07.15 11:43:03 -07'00'
Unit Copies LEI, WO 5 LEI, Region 5 US Attorney 0 Other 0 Other 0	Approved By: Approved By:	$\frac{07/15/2021}{07/15/2021}$ Date

NOTE: This document is for OFFICIAL USE ONLY. It and its contents are not to be distributed outside your agency, nor duplicated, without prior approval of the USDA, Forest Service, Law Enforcement and Investigations.

UAS TRENT OF MERCE	REPORT OF INVESTIGATION (Reference FSH 5309.11)		Case/File Number 20-05-MAMP0J1
Controlling (Office	Investigating Office	
R-5 – Lav	w Enforcement and Investigations	R-5 – Sierra National Forest	
Case Type		Investigative Period	
Fire		From: September 4, 2020 To: Ma	y 25, 2021
Case Status	8	Report Type	
Closed—	Solved	Final	
Case Name	9	Investigated By	
Creek Fi	re, SNF	Special Agent b6 & b7C	

SYNOPSIS

On September 4, 2020, at approximately 1818 hours, Fresno County Sheriff's Dispatch received a 911 call indicating there was a fire in the area of Big Creek, CA near Camp Sierra. Additionally, the fire was called into the Sierra National Forest Dispatch Center at approximately 1833 hours by a Fire Prevention Technician stationed in Big Creek.

The Creek Fire originated just south Big Creek drainage, west of Camp Sierra and north of Huntington Lake Road, on the Sierra National Forest, within the Eastern District of California, Fresno County. The Creek Fire burned 379,895 acres, destroyed 853 structures, and damaged an additional 64 structures.

To date, investigators have exhausted all available leads and resources in an attempt to identify subject/s that were in the vicinity of the Creek Fire origin prior to and shortly after the fire was reported. At this time, no subject/s have been identified. Based on the above facts, along with the fact that no physical evidence was located to support any other fire cause categories as the probable cause of the Creek Fire; investigators have determined that lightning is the probable cause (see exhibit 30, Creek Fire Origin and Cause Report).

Future leads or information obtained related to the cause of the Creek Fire may result in a change of this conclusion.

Case considered closed, pending further leads.

Distribution			Prepared By:	b6 & b7C	Digitally signed by Date: 2021.07.15 11	
<u>Unit</u>		<u>Copies</u>		Signature	_	Date
LEI, WO						
LEI, Region	5	1	Reviewed By:			
LEI, Region				Signature		Date
US Attorney						
Other			Approved By:			
Other				Signature		Date

NOTE: This document is for OFFICIAL USE ONLY. It and its contents are not to be distributed outside your agency, nor duplicated, without prior approval of the USDA, Forest Service, Law Enforcement and Investigations.

USDA Forest Service FS-5300-24a (2/2008)
Previous Editions are Obsolete



REPORT OF INVESTIGATION

(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

INTRODUCTION

On September 4, 2020 between 1818 and 1833 hours, the Fresno County Sheriff's Dispatch and Sierra National Forest Dispatch received reports of a wildfire in Big Creek, CA near Camp Sierra. The fire, identified as the Creek Fire, was burning on National Forest System (NFS) lands of the Sierra National Forest, within the Eastern District of California. Over the next several days and weeks, the Creek Fire recorded critical rates of fire spread. The Creek Fire was declared contained on December 24, 2020. The Creek Fire destroyed 853 structures, damaged 64 structures and burned 379,895 acres in both Fresno and Madera counties.

A US Forest Service Wildland Fire Investigation Team (WFIT) was requested to conduct the origin and cause investigation. Additionally, Cal Fire provided two Fire Investigators to assist with the origin and cause investigation as well. Personnel involved in the origin and cause investigation included: USFS SA b6 & b7C, and Cal Fire Investigator b6 & b7C.

DETAILS OF THE INVESTIGATION

18 U.S.C. § 1855: Whoever, willfully and without authority, sets on fire any timber, underbrush, or grass or other inflammable material upon the public domain or upon any lands owned or leased by or under the partial, concurrent, or exclusive jurisdiction of the United States, or under contract for purchase or for the acquisition of which condemnation proceedings have been instituted, or upon any Indian reservation or lands belonging to or occupied by any tribe or group of Indians under authority of the United States, or upon any Indian allotment while the title to the same shall be held in trust by the Government, or while the same shall remain inalienable by the allottee without the consent of the United States, shall be fined under this title or imprisoned not more than five years, or both.

18 USC § 1856: Whoever, having kindled or caused to be kindled, a fire in or near any forest, timber, or other inflammable material upon any lands owned, controlled or leased by, or under the partial, concurrent, or exclusive jurisdiction of the United States, including lands under contract for purchase or for the acquisition of which condemnation proceedings have been instituted, and including any Indian reservation or lands belonging to or occupied by any tribe or group of Indians under the authority of the United States, or any Indian allotment while the title to the same is held in trust by the United States, or while the same shall remain inalienable by the allottee without the consent of the United States, leaves said fire without totally extinguishing the same, or permits or suffers said fire to burn or spread beyond his control, or leaves or suffers said fire to burn unattended, shall be fined under this title or imprisoned not more than six months, or both.

* * * * *



(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

REPORTING PARTIES, WITNESSES & INITIAL RESPONSE INTERVIEWS

September 4, 2020		
INITIAL REPORTS:		

On September 4, at approximately 1818 hours, Fresno County Sheriff's Dispatch received a 911 phone call from telephone number 6 & b7C. The call was traced back to the residence of 6 & b7C. Lakeshore, CA. It was later determined that 5 & b7C. Was the first 911 caller. Substantiated the following:

b6 & b7C. Was at 56 & b7C. The call was traced back to the residence of 5 & b7C. Was interviewed by substantiated the following:

b6 & b7C. Was at 56 & b7C. The call was traced back to the residence of 5 & b7C. Was interviewed by substantiated the following:

who indicated there was a fire below Big Creek. b6 & b7C made the 911 call to Fresno Sheriff's Dispatch from the landline at the b6 & b7C made the 915 mol b6 & b7C made the 915 call to Fresno Sheriff's Dispatch from the landline at the b6 & b7C mol b6

On September 4, at approximately 1833 hours, USFS Fire Patrol b6 & b7C reported the Creek Fire to Sierra National Forest Dispatch. b6 & b7C was interviewed by SA substantiated the following:

b6 & b7C indicated he was working at the USFS Big Creek Fire Station when he received a walk-in report regarding the fire. b6 & b7C indicated b6 & b7C , came into the fire station and said there was a fire. b6 & b7C to confirm the fire. After confirming the fire, b6 & b7C notified Sierra National Forest Dispatch (See exhibit 2, 2020-09-07 MOI b6 & b7C).

September 5, 2020

On the morning of September 5, SA was notified of the Creek Fire. SA responded to the Creek Fire from the Dolan Fire, which was located on the Los Padres NF. While in route to the Creek Fire SA received multiple sources of information related to incident, including: a map identifying the suspected general origin area of the Creek Fire, the CAD card from Sierra NF Dispatch, and lightning activity maps from Sierra NF Dispatch.

While in route to the Creek Fire, SA was monitoring radio traffic for the incident. Based on the immediate life threat, along with the immediate threat to communities and infrastructure surrounding the Creek Fire, SA requested the assistance of the USFS Wildland Fire Investigation Team (see exhibit 3, 2020-09-05_SIR_D6 & b7C

September 6, 2020

On September 6 at approximately 1030 hours, SA be about LEO be about SA entered the Creek Fire and went to the location identified by fire suppression personnel as the access point to the origin area. Due to the amount of smoke, vegetation burning in the area, and active fire in the vicinity it was determined the area was unsafe to work in.



Case/File Number

(Reference FSH 5309.11)

20-05-MAMP0J1

At approximately 1400 hours, all personnel involved in the origin and cause investigation were in-briefed at the Sierra NF Supervisor's Office in Clovis, CA. Initial reporting parties and fire suppression personnel were identified, and team members were tasked with conducting interviews.

Investigator be a tolerance of the first arriving be a bounded a telephonic interview with the first arriving be a bounded at the bounded at

AA-15 arrived over the fire at approximately 1900 hours on September 4. bottom on the north facing slope of the hillside. b6 & b7C indicated the fire was approximately one acre or less in size when they arrived. b6 & b7C did not see any people in the area of the fire. b6 & b7C directed one tanker plane to make a split drop on the fire. Additionally, a helicopter made two water drops on the fire. All air resources were then released from the fire and returned to the Fresno Air Tanker Base in Fresno, CA.

provided Investigator with a photo taken by AA-15 beautiful AA-15 beautifu

SA b6 & b7C contacted b6 & b7C is the b6 & b7C for Helicopter 25M (H25M), the helicopter identified as making water drops on the fire on September 4. obtained from H25M b6 & b7C (see exhibit 5, 2020-09-06_SIR-H25M).

SA also contacted personnel assigned to Helicopter 534 (H534). H534 was identified on the Sierra NF Dispatch CAD card as another air resource that had responded to the Creek Fire. During SA interview with H534 personnel, the following was substantiated:

While en route to the fire, H534 was directed by Air Attack to land at Ely Meadow. While flying over the fire, b6 & b7C indicated he saw light smoke but no flames.

According to b6 & b7C the fire was stationary and not showing much growth.

According to b6 & b7C the fire was stationary and not showing much growth.

B6 & b7C the fire was stationary and not showing much growth.

B6 & b7C the fire was stationary and not showing much growth.

B6 & b7C the fire to be about one acre or less in heavy fuels (see exhibit 6, 2020-09-06_SIR-H534_b6 & b7C).

Due to the presence of powerlines and electrical utility infrastructure around the suspected origin area or the Creek Fire, preservation requests were submitted via email to both Southern California Edison (SCE) and Pacific Gas and Electric (PGE), by SA (see exhibit 7, 2020-09-06_SIR SCE phone call b6 & b7C).

September 7, 2020

At approximately 0814 hours, SA were assigned as the b6 & b7C and b6 & b7C are both USFS firefighters on the Sierra National Forest. During the interview b6 & b7C and b6 & b7C and b6 & b7C are provided a detailed description of their initial attack actions during the evening of September 4, when the fire first started. b6 & b7C also provided photographs he had taken of the fire. Additionally, both b6 & b7C and b6 & b7C and b6 & b7C also provided photographs are provided GPS tracks documenting their path while entering and making access to the fire (see exhibit 8, 2020-09-07_MOI Crew 3 b6 & b7C).



Case/File Number

(Reference FSH 5309.11) 20-05-MAMP0J1 conducted a telephonic interview with b6 & b7C At approximately 0900 hours, SA the Creek Fire. Based on b6 & b7C it was determined that b6 & b7C had likely seen the fire in its early stages. During the interview, substantiated the following: b6 & b7C was notified of the fire by an employee described the fire as being a smoke b6 & b7C went to the helipad (LZ) at Point Road. chimney with a single snag on fire. Later that night, saw an ember fly from the fire, causing the fire to spread. agreed to meet with SA on September 8 to provide more detailed information. Additionally, agreed to provide SA with a video of the Creek Fire taken from the helipad (see exhibit 9, 2020-09-07 MOI b6 & b7C At approximately 0930, SA box conducted a telephonic interview with b6 & b7C was identified as the initial reporting party by Sierra NF Dispatch. b6 & b7C is a b6 & b7C assigned to the Big Creek station in Big Creek, CA. During the interview b6 & b7C substantiated the following: b6 & b7C indicated he did call the fire in to dispatch; however, it was actually a walk-in report at the Big Creek Station. b6 & b7C identified the walk-in subject as b6 & b7C and provided SA b6 & b7C contact information. b6 & b7C also provided SA with the contact information for b6 & b7C indicated b6 & b7C who is also a Forest Service employee, was one of the initial witnesses to the fire and assisted with directing initial suppression efforts from the Big Creek Helipad. b6 & b7C described his initial observations of the fire. b6 & b7C indicated the fire was initially a small wisp of smoke turning into a column. b6 & b7C said he could tell the fire had been a ground fire that was developing in heavy jackpotted fuels. b6 & b7C indicated he had not observed lightning activity in the Big Creek drainage during the summer of 2020. b6 & b7C also indicated the area where he observed the fire is not very accessible to the public due to the thick brush vegetation and the large quantity of fallen bug kill trees. b6 & b7C also provided SA with a Google Earth image and a dropped pin location of where he estimated the fire was at (see exhibit 2, 2020-09-07 MOIb6 & b7C At approximately 1032 hours, SA and LEO and LEO interviewed b6 & b7C and b are both USFS firefighters on the Sierra National Forest. During the interview, b6 & b7C and b6 & b7C provided a detailed description of their initial attack actions during the evening of September 4, when the fire first started (see exhibit 10, 2020-09-07 MOI b6 & b7C conducted a telephonic interview with b6 & b7C. During the interview, b6 & b7C At approximately 1158 hours, SA substantiated the following: confirmed he had walked into the Big Creek station and reported the fire to b6 & b7C indicated he was notified of a possible fire near Camp Sierra via text message from b6 & b7C provided SA b6 & b7C contact information. b6 & b7C confirmed he had gone to the Big Creek Fire Station, after observing the fire, and . Additionally, 66 & 67C identified one of the subjects observed on a UTV by incoming fire reported the fire to b6 & b7C personnel as b6 & b7C , who is a Cal Fire firefighter (see exhibit 11, 2020-09-07 MOI b6 & b7C At approximately 1237 hours, SA conducted a telephonic interview with b6 & b7C . During the interview, b6 & b7C substantiated the following:



Case/File Number

(Reference FSH 5309.11)

20-05-MAMP0J1

indicated she had heard the smoke check in the area of Camp Sierra. Sheriff's channel. b6 & b7C also confirmed b6 & b7C also c

At approximately 1245 hours, Investigator b6 & b7C conducted a telephonic interview with AA-15 b6 & b7C . During the interview, b6 & b7C substantiated the following:

b6 & b7C the air attack plane and arrive over the scene at approximately 1900 hours on September 4. btook some photos as they arrived over the fire and some photos as they left the fire.

provided the photographs he obtained while over the fire to Investigator b6 & b7C (see exhibit 13, 2020-09-07_MOI b6 & b7C).



(Photograph provided by AA-15 b6 & b7C

At approximately 1250 hours, SA and LEO conducted a telephonic interview with b6 & b7C is a USFS firefighter assigned as b6 & b7C on Engine 42. b6 & b7C was identified as the first person to access the area of the fire on foot. During the interview, b6 & b7C substantiated the following:

b6 & b7C and engine 42 were in Prather, CA when they were dispatched to the fire reported to be below Camp Sierra. While on Huntington Road near Camp Sierra Engine 42 was flagged down by two subjects hanging pink flagging to alert responding resources of the fire's location. Engine 42 first attempted to drive down into the canyon, but realized the road was not accessible with the engine.

b6 & b7C continued on foot down the road, passing a woodchipper and fresh cuts on trees and brush along the road.

Additionally, b6 & b7C noticed red and black flagging leading into the brush as he began to scout a way into the fire. As continued hiking downhill towards the location of the fire, he continued to notice the flagging along with foot tracks that appeared to have been recent. The footprints appeared to only be going downhill towards the bottom of the canyon. Hatchet marks on the branches were also visible along with cigarette butts.

b6 & b7C was able to hike all the way to the fire's edge with the flagging and footprints still visible up to the fire.
b6 & b7C estimated the fire to be 2 to 3 acres at the time, burning downhill towards Big Creek, with winds blowing 5-10



Case/File Number

20-05-MAMP0J1 (Reference FSH 5309.11) miles per hour and gusting to 20 miles per hour, the slope was approximately 45%, fuel bed was dead and down branches, pine needles cast, and white thorn bush. With all the signs in the area b6 & b7C decided to hike back out of the canyon (see exhibit 14, 2020-09-07 MOI b6 & b7C On September 7, and again on September 8, SA spoke with Sierra NF b6 & b7C regarding the flagging observed in the area of the fire origin observed by initial attack suppression resources. During the conversations, substantiated the following: stated that the area north of the Dumpster Road and west of the Camp Sierra site contained several proposed timber sale and fuel break units that were part of the proposed Musick Project. Areas designated for reforestation within these units were marked with red and black striped flagging. Rather than being just around the boundary of the unit, this flagging was throughout the acreage so that a future contractor would know to cut the entirety of the area so that it could be reforested. several project maps related to the Musick Project within the Big Creek drainage. SA observed that units 39, 4, and 95 appeared to be in proximity to the fire as shown by the initial attack stated that units would have had significant amounts of red and black striped flagging in them because those units were targeted for significant reforestation. asked if she was familiar any other activity in the area. stated that she received email notification from SCE's b6 & b7C that they were conducting brushing and chipping work along their easement in the areas of marked units. was unaware of any other significant recreation trails or uses in the area, nor of any that they were conducting brushing and chipping work along their easement in the mining or occupancy associated with the sites. asked what work had been recently completed in the units. stated that the last work completed in the site was the reforestation marking, which was completed as of July 21, 2020, and forwarded an email from July stated that no additional work had recently been 21, 2020 that documented the completion of the work. conducted in the area, and as b6 & b7C she would know if any work was being conducted by the Forest Service or Forest Service contractors in the units (see exhibit 15, 2020-09-07 MOI b6 & b7C At approximately 1800 hours, Investigator b6 & b7C reviewed the Fresno County Sheriff 911 recording related to the initial report , only one person called in to report the fire to FSO Dispatch of the Creek Fire. According to 6 & 57C Center. According to the recording, the caller was driving on Huntington Lake Road when she saw drift smoke in the Camp Sierra area. The call originated from phone # b6 & b7C and was traced back to the residence of b6 & b7C Lakeshore, CA. At the time the actual identity of the caller was unknown (see exhibit 16, 2020-09b6 & b7C 07_FSO 911_b6 & b7C). At approximately 1940 hours, SA conducted a telephonic interview with b6 & b7C and b6 & b7C b6 & b7C Helicopter 25M and b6 & b7C Helicopter 25M responded September 4, during the initial attack. During the interview, b6 & b7C Substantiated the following: . Helicopter 25M responded to the Creek Fire on b6 & b7C described the fire as being about ½ to 1 acre in size upon their arrival. b6 & b7C indicated the fire was located on the south side of the Big Creek drainage, west and slightly south of the confluence of Big Creek and Sheep Thief Creek. b6 & b7C estimated the fire to be approximately 100 yards above the creek bottom. b6 & b7C indicated there was a 150-foot tall dead snag on fire. According to be a bound to be a bound of the dead snag had spots on fire on it from the ground up. be advised he made two water drops on the fire. be a bound on the fire on the fire. be a bound on the fire on the fire on the fire. be a bound on the fire on the fire of the fire on the fire of the fire on the fire of t

REPORT OF INVESTIGATION

ESTIGATION

(Reference FSH 5309.11)

20-05-MAMP0J1

Case/File Number

also indicated he did not see any obvious trails or roads near the fire (see exhibit 17, 2020-09-07_MOI b6 & b7C (H25M b6 & b7C

September 8, 2020

On September 8 at approximately 1000 hours, SA met with b6 & b7C a second time.

SA regarding his observations at the time the fire began. During the second interview, additional details:

employee, informed saw the fire. b6 & b7C had seen a post about the fire on Facebook. Once b6 & b7C saw the fire, he notified saw the fire, he notified saw the fire, he notified saw the fire on Facebook. Once b6 & b7C observed the fire from the helipad (LZ) on Point Road he saw a small smoke chimney and a single standing dead snag, with the entire length of the snag on fire.

According to b6 & b7C the only open flames he saw were on the dead snag, he did not see any on the ground. The provided photographs of the fire in its early stages to SA the base of the fire in its early stages to SA to complete the fire in its early stages

On September 8 at approximately 1100 hours, SA the Incident Command Post (ICP).

a Forest Service employee, was identified as a witness to the early stages of the Creek Fire. During the interview substantiated the following:

was notified about the fire by stayed out on the point as a lookout while be stayed out on the point as a lookout while be stayed out on the point as a lookout while be stayed out on the point as a lookout while be stayed out on the point as a lookout while be stayed out on the point as a lookout while be stayed out on the point as a lookout while be stayed out on the fire. The stayed out on the point as a lookout while be stayed out on the fire. The stayed out on the point as a lookout while be stayed out on the fire. The stayed out on the fire observed observed the tanker make split drops on the fire. The stayed out on the fire observed obse

At approximately 1400 hours SA brown and Investigator b brown went to the access point for the suspected origin area. The location in question is a large turnout on Camp Sierra Road, just north of Huntington Lake Road (commonly referred to as the "dumpster site"). At approximately 1450 hours, b brown and b brown with investigators. b brown are sident of Big Creek and a firefighter with Cal Fire. b brown interviewed b brown and b brown b brown b brown and b brown and b brown and b brown and b brown substantiated the following:

got a text message from b6 & b7C and b6 & b7C drove to the end of point road to check it out (the LZ). b6 & b7C and b6 & b7C the fire was in its incipient stage. b6 & b7C or 100' x 100'. b6 & b7C indicated the fire was really slow with low to no rate of spread at the time. There were no winds and the column was going straight up. Approximately 1-2 hours later, the down canyon winds started coming in with pretty good gusts. That is when the fire started running up the south slope with significant fire growth.

When asked about access to the area, be and be a bout access to the area, and be a bout access to the area, be



Case/File Number

(Reference FSH 5309.11) 20-05-MAMP0J1 and nasty. Both b6 & b7C and b6 & b7C indicated they had taken some photos of the fire and agreed to email them to SA (see exhibit 20, 2020-09-08_MOIb6 & b7C At approximately 1542 hours, SA and LEO hours, SA and LEO hours, SA interviewed b6 & b7C a USFS b6 & b7C on the Sierra National Forest, b6 & b7C when he arrived on scene at the Creek Fire. During the interview, b6 & b7C substantiated the following: b6 & b7C was at the district office in Prather, CA when he heard Patrol b6 & b7C) call in the smoke report over the radio. b6 & b7C is familiar with the area of Big Creek, having worked there for several years and knew it was rough terrain with a high tree mortality rate. b6 & b7C arrived on scene at approximately 1910 hours and b6 & b7C approximately 1921 hours. b6 & b7C (E-42) arrived on scene prior to b6 & b7C and attempted to make access while providing information back to b6 & b7C was having trouble accessing the area due to the thick brush. b6 & b7C also recalled b6 & b7C saying he had begun to see fresh cuts in the brush and footprints in the area. After b6 & b7C disengaged and returned to b6 & b7C location they discussed b6 & b7C observations and concluded there may be a marijuana cultivation site in the area, although no marijuana plants or irrigation lines were seen by b6 & b7C A short time later, Fresno Crew 3 and Fresno Crew 4 reengaged the fire. b6 & b7C went with the crews and showed them how to access the area of the fire. b6 & b7C reported to b6 & b7C that the fire was approximately 1 acre in size with retardant and water drops at the head of the fire. Additionally, multiple dead standing trees were on fire. All resources were eventually disengaged from suppression efforts due to the fire burning in the dead standing trees in the area. b6 & b7C also stated access to the area prior to the fire was unlikely by the general public (see exhibit 21, 2020-09-08_MOI b6 & b7C September 10, 2020 On September 10 at approximately 0900, Investigator b6 & b7C received and reviewed 911 recordings obtained from the California Highway Patrol (CHP). A review of the recordings confirmed there were no reports of the fire to CHP until the morning of September 5 (see exhibit 22, 2020-09-10 CHP 911 b6 & b7C). On the morning of September 10, SA b6 & b7C spoke with b6 & b7C is a cabin owner at Camp Sierra, a small community consisting of recreational cabins and a commercial camping/recreation operation. The area of Camp Sierra is the closest populated area to the identified origin area of the Creek Fire. During the interview with b6 & b7C she substantiated the following: b6 & b7C family has had a cabin in Camp Sierra for many years. There is a trail from Camp Sierra that accesses an area referred to as "the potholes", but that trail goes up drainage from the Camp Sierra area. b6 & b7C walks and hikes around the area frequently. When SA b6 & b7C showed b6 & b7C the general location the Creek Fire started, she indicated she had never been down there because the vegetation was so thick and there were so many trees down. b6 & b7C was aware of an old fire road that was overgrown, which goes down to Big Creek in the general area of the origin. b6 & b7C did indicate she walks along the fire road behind the Camp Sierra dumpster sometimes. b6 & b7C has not noticed an increase in foot or vehicle traffic in that area. b6 & b7C also indicated there were trees down along the fire road, making it inaccessible for vehicles. b6 & b7C also advised that people from Camp Sierra don't generally hike down drainage along Big Creek because the drainage is so steep and there are a lot of areas that cliff out.



(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

b6 & b7C mentioned there have been rumors among cabin owners within Camp Sierra that there was a marijuana grow somewhere below the camp. b6 & b7C indicated she had never seen anything in the area to corroborate the rumor.

b6 & b7C was at her cabin in Camp Sierra the day the fire started. She indicated her cabin is b6 & b7C camp Sierra and they were out on the back deck most of the evening. b6 & b7C specifically recalled she did not hear any shooting in the area the entire day. b6 & b7C said the road behind the dumpsite is outside of the no shooting area, so people do go back there to shoot sometimes (see exhibit 23, 2020-09-10_MOI b6 & b7C).

September 11, 2020

On September 11, SA conducted telephonic interviews with Forest Service employees assigned to lookout towers around the area where the Creek Fire had originated. SA spoke with b6 & b7C (Shuteye Lookout), and b6 & b7C (Shuteye Lookout). During the interviews with the lookouts, the following was substantiated:

b6 & b7C, the Mt. Tom lookout indicated the monsoonal thunder and lightning storms that typically develop on the crest of the Sierra-Nevada mountain range do not typically reach the area of Big Creek. When asked specifically about the lightning event that occurred during the overnight hours of August 23-24, b6 & b7C could not recall if he was working. Additionally, b6 & b7C indicated Kaiser Peak and the Kaiser mountain range obstruct his view from the lookout to the area of Big Creek and the area towards Shaver Lake.

b6 & b7C, one of the Forest Service employees assigned at the Shuteye lookout, indicated the majority of lightning activity he has observed over the summer was to the east of the lookout, in the area of Balloon Dome. b6 & b7C also advised there is typically a decent view towards the Big Creek area; however, it is partially obstructed by a ridgeline. When asked specifically about the lightning event that occurred during the overnight hours of August 23-24, b6 & b7C said he had swapped out with the other Shuteye lookout, b6 & b7C.

prior to and on the day the Creek Fire started, due to smoke from the surrounding wildfires. The Creek Fire from the lookout when it was first called in on September 4, 2020, due to reduced visibility caused by smoke. When asked specifically about the lightning event that occurred during the overnight hours of August 23-24, when a specifically socked in and there was poor visibility to the east and west. Additionally, the called getting woke up by the thunder associated with the storm; however, he did not stay awake and watch the storm as it passed over (see exhibit 24, 2020-09-11_SIR_DOCE_100.000).

September 15, 2020

On September 15, 2020, Investigator went to Big Creek to meet with b6 & b7C, in order to obtain original photographs directly from phose b6 & b7C phone (see exhibit 25, 2020-09-15 MOI phose b6 & b7C also encountered and interviewed b6 & b7C substantiated the following:

phone call from her friend b6 & b7C received a reporting a fire below Big Creek. phone but the line was busy, so b6 & b7C requesting she call from a landline. b6 & b7C made the 911



was unsafe to work in.

Case/File Number

REPORT OF INVESTIGATION 20-05-MAMP0J1 (Reference FSH 5309.11) call to the Fresno Sheriff's 911 dispatch center reporting the fire. b6 & b7C residence after the 911 call was completed and showed b6 & b7C a picture of the fire taken on b6 & b7C mobile phone (see exhibit 1, 2020-09-15 MOI b6 & b7C Investigator b6 & b7C also encountered and interviewed b6 & b7C was the first person to notify of the fire. During the interview b6 & b7C substantiated the following: b6 & b7C was at his home in Big Creek, CA. b6 & b7C received a phone call from his wife, who stated she saw on social media there was a fire near Big Creek. b6 & b7C rode his motorcycle up Huntington Lake Road to the "Beaver Slide" to see the fire. b6 & b7C confirmed there was a fire and returned to his house in Big Creek to begin evacuating. On the way to his house, b6 & b7C saw b6 & b7C and stopped to tell him there was a fire. b6 & b7C did not take any pictures of the fire when he first saw it from the "Beaver Slide" area (see exhibit 26, 2020-09-15 MOI b6 & b7C Investigator b6 & b7C also spoke with b6 & b7C while in Big Creek. b6 & b7C is b6 & b7C husband and was with her when they initially saw the fire from the "Beaver Slide" on Huntington Lake Road. During the interview, b6 & b7C substantiated the following: b6 & b7C was riding his motorcycle with his wife, b6 & b7C , to the b6 & b7C residence in Lakeshore for dinner. When they were near the "Beaver Slide" on Huntington Lake Road, and b6 & b7C both noticed a smoke column coming from the canyon below Big Creek. b6 & b7C tried to call 911 from her cell phone but the line was busy. b6 & b7C then called her friend, b6 & b7C at the b6 & b7C residence to call 911 from a landline phone. b6 & b7C took a picture with her mobile phone, and they continued up to the b6 & b7C residence. Investigator b6 & b7C spoke with b6 & b7C via telephone regarding the picture she had taken of the fire. b6 & b7C indicated she was looking for the pictures on her phone but had not been able to find them (see exhibit 27, 2020-09-15_MOI b6 & b7C While in Big Creek, Investigator b6 & b7C was also provided contact information for b6 & b7C and b6 & b7C. Investigator b6 & b7C spoke with both and b6 & b7C via telephone. Both from the Big Creek Heliport on the day the fire started. b6 & b7C and taken via mobile phone (see exhibit 28, 2020-09-15_MOI b6 & b7C) photos b6 & b7C; and exhibit 29, 2020-09-15_MOI b6 & b7C and taken via mobile phone (see exhibit 28, 2020-09-15_MOI b6 & b7C). Investigator b6 & b7C and b6 & b7C and b6 & b7C and b6 & b7C with the photos they bad taken via mobile phone (see exhibit 28, 2020-09-15_MOI b6 & b7C). Investigator b6 & b7C and b7C and b7C an ^{b6 & b7C}Photos_b6 & b7C_{).} ORIGIN AND CAUSE INVESTIGATION (see exhibit 30, FS-5300-45_Wildland Fire Origin and Cause Report) September 6, 2020 On September 6 at approximately 1030 hours, SA b6 & b7C LEO FPT FPT SA and USFS Patrol Captain b6 & b7C entered the Creek Fire and went to the location identified by fire suppression personnel as the access point to the

origin area. Due to the amount of smoke, vegetation burning in the area, and active fire in the vicinity it was determined the area



Case/File Number

(Reference FSH 5309.11)

20-05-MAMP0J1

At approximately 1630 hours, SA attempted to reach the access point to the origin area again. Due to active fire spread and fire suppression efforts along Highway 168 near Camp Edison, SA was not able to access the area (see exhibit 31, 2020-09-06_SIR bf & bf C

September 7, 2020

At approximately 1200 hours, Investigator be a brown attempted to reach the access point for the suspected origin area, to determine if it would be safe for origin and cause investigators to enter the area. As Highway 168, he observed heavy fire activity impacting the area east of his location. Highway 168, he observed heavy fire activity impacting the area east of his location. The beautiful passed Cressman's Market on the fire activity. A short time later, was forced to turn around due to the fire activity. A short time later, was point he observed heavy down fuels and stumps still burning, along with many snags near and along the access road to the suspected origin area. Investigator would be needed to gain access to the origin area (see exhibit 33, 2020-07-07. Daily Log be a brown by the passed Cressman's Market on be access point for the suspected origin area. As beautiful passed Cressman's Market on be access by a brown for the access point for the suspected origin area. As beautiful passed Cressman's Market on be accessful at getting through the perimeter of the fire. When be access point he observed heavy down fuels and stumps still burning, along with many snags near and along the access road to the suspected origin area. Investigator be access to the origin area (see exhibit 33, 2020-07-07. Daily Log be accessed origin area.

September 8, 2020

On September 8, 2020, SA 68 67C FPT and Investigator of the Suspected origin area. They followed a roadway heading west from the Camp Sierra Dumpster. The roadway switched to the east and they observed a dozer line leaving the roadway heading north. Personnel continued to follow the dozer line until it ended and proceeded a short distance further to the suspected origin area. Walking distance to the suspected origin area was approximately 0.80 miles. Personnel observed large scale (macro) indicators such as angle of char on tree trunks, foliage freeze on tree limbs, and white ash deposits trees and brush stems that indicated a major advancing run with high burn intensity coming from the general area of the Big Creek drainage to the two track road that hand crews used to access the fire in its early stage. When personnel made it to the general area of the suspected origin, they observed an aerial retardant line applied by a tanker. Based on statements obtained from witnesses and suppression personnel, investigators believed this to be a tanker drop across the head of the fire during initial attack suppression on September 4, 2020. Additionally, investigators observed recent signs of chainsaw activity and disturbed soil where the two Fresno hand crews had accessed the fire (see exhibit 36, 2020-09-08_SIR_

106 & 107 C and exhibit 107 C and ex

September 9, 2020

On the morning of September 9, origin and cause investigators returned to the suspected origin area. Personnel used off highway vehicles to gain access to the area above the origin. FPT bearing and LEO began observing burn indicators within the advancing run observed the day prior by FPT sales by SA and Investigator and Investigator bear observing burn indicators within hiked the GPS track provided by Fresno 3 began observing burn indicators within hiked the GPS track provided by Fresno 3 bear observed as mall drainage towards Big Creek.

SA sales by C and Investigator bear of Sa by C and Investigator and Investigator and bear of Sa by C and Investigator bear of Sa by C and Investigato

To the north of the origin area, Investigators observed aerial retardant on the rocks and vegetation. Investigators believed this to be a second drop from the tanker during initial attack suppression on September 4. Additionally, Investigators were able to use photographs taken by Fresno 3 b6 & b7C on the evening of initial attack to identify the northeast edge of the fire at



Case/File Number

(Reference FSH 5309.11)

20-05-MAMP0J1

the time the photo was taken. As investigators hiked out of the area, they followed the line cut in by the Fresno Crews during initial attack. The line in question travelled up from a small drainage to the two-track where the retardant line was identified (see exhibit 40, 2020-09-09_Daily Log_b6 & b7C

On the evening of September 9, SA obtained the Corelogic STRIKEnet lightning data for the area between the dates of August 22, 2020 and September 4, 2020. The lightning data identified three cloud-to-ground lightning strokes within a fifteen-mile radius of Big Creek; however, none of the strokes were in the immediate vicinity of the identified origin area. Additionally, all three documented lightning strokes occurred during the early morning hours on August 24, 2020 (see exhibit 42, 2020-09-09_CoreLogic Lightning Maps_base)

September 10, 2020

On the morning of September 10, Investigators 56 & 57C and and entered the area above the origin utilizing off highway vehicles. Investigators continued to observe and flag fire spread indicators within the identified general origin area.

On the afternoon of September 10, Fire Engine Operator (FEO) 66 & b7C the first resource to hike into the fire on September 4, met with investigators near the origin area. FEO 68 b7C identified the area where he observed the fire burning to investigators. Additionally, b6 & b7C pointed to a large snag and identified the tree as the "candlestick" (burning snag) that was burning when he first approached the fire (see exhibit 46, 2020-09-10_MOI 66 & b7C).

Due to the hazard posed to investigators by the standing burned snag, along with several other snags within the general origin area, personnel were unable to continue working any further into the area. As personnel departed the area, SA secured the two-track access road with flagging and by the standing burned snag, along with several other snags within the general origin area, personnel were unable to continue working any further into the area. As personnel departed the area, SA secured the two-track access road with flagging and by the standing burned snag, along with several other snags within the general origin area, personnel were unable to continue working any further into the area.

On the evening of September 10, SA creek Fire originated. The lightning data obtained from Earth Networks system to obtain additional lightning data for the area the Creek Fire originated. The lightning data obtained from Earth Networks was from August 21, 2020 to September 5, 2020. According to the lightning data captured by Earth Networks, there were three cloud-to-cloud strikes and one cloud-to-ground strike during the time period; however, all strikes were at least eight miles west-northwest of the Creek Fire origin area (see exhibit 47, 2020-09-10 Report-Earth Networks Lightning Map 08212020-09042020

September 11, 2020

On the morning of September 11, Investigators **b6 & b7C**identified the day prior were still standing. Investigators continued to identify spread indicators in areas away from the snags.

and be a b7C determined they could not proceed with the origin and cause investigation until the hazard snag was mitigated. Investigation of the snag and knocking it to the ground. The fir tree contacted the snag; however, it did not knock it down. At approximately 1400 hours and be a b7C left the area.

September 12, 2020



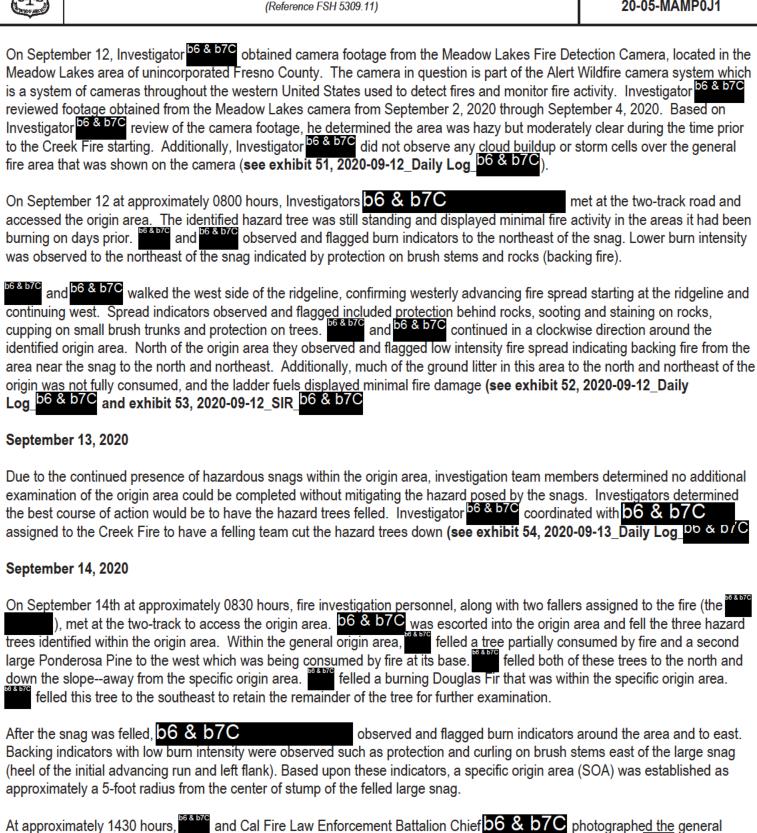
At approximately 1430 hours,

REPORT OF INVESTIGATION

Case/File Number

(Reference FSH 5309.11)

20-05-MAMP0J1



origin area of the Creek Fire from the Southern California Edison Helipad located in Big Creek, California. SA

b6 & b7C duplicated the approximate locations of photographs taken shortly after the fire was reported on September 4, 2020.



09-17_SIR-b6 & b7C Tree Cruise-b6 & b7C

REPORT OF INVESTIGATION

Case/File Number

(Reference FSH 5309.11)

20-05-MAMP0J1

As a reference point, and be a brown and be a brown stood in the general origin area and be a brown stump visible from the Big Creek Helipad, this stump was just east of the specific origin area. This stump was also 33'4"east of the Douglas Fir stump located in the specific origin area (the Douglas Fir stump was not visible from the Big Creek Helipad as the site line was obstructed by small trees and brush). be a brown took 17 photographs from this location. By comparing the photographs and provided with the series of photographs taken by be a brown it appeared that the Douglas Fir felled within the specific origin area was the same tree photographed with visible flame in the top portion of the tree shortly after the fire was reported (see exhibit 57, 2020-09-14_SIR_Tree Falling and Photographs from Big Creek Helipad_be a brown and be
September 15, 2020
On September 15 at approximately 0845 hours, investigators accessed the Creek Fire origin area. and possible arrived on scene and made a close visual inspection within the SOA. No competent ignition sources were found within the identified specific origin area. A significant opening (crack) in the fallen snag, which ran from the top of the remaining tree snag to the base of the trunk, was once again inspected. The crack appeared to run through the bark on the eastern side of the trunk. Investigators examined the area surrounding the stump of the felled snag to determine if blow holes, fulgurites, or other signs of lightning were present. Investigator inspected the root collar area and methodically dug a hole at the base of the trunk where the crack met the soil. Set of the trunk used small tools, wooden skewers and a two-inch paint brush to slowly pick and brush away the soil, with the intention of observing the roots of the tree for possible damage due to a lightning strike. At approximately 15 inches deep from the surface of the soil, collected what appeared to be charred material. SA collected three samples of the possible charred debris for future examination, if possible (see exhibit 60, 2020-09-15 SIR-Collection of Charred Root Debris-
September 16, 2020
On September 16, SA contacted Laboratory in Missoula, MT. SA contacted contacted contacted b6 & b7C, a former US Forest Service researcher who retired from the Fire Sciences to inquire if there was any method to test a cross section of tree in order to determine if the tree had been struck by lightning. b6 & b7C indicated he was not aware of any method to determine if a tree had been struck by lightning, other that by visual inspection.
SA b 7C also contacted b 6 & b 7C, a meteorologist with the National Weather Service that was b 6 & b 7C for the southern portion of the fire. b 6 & b 7C assisted SA sisted SA b 9 obtaining a series of photos and videos of weather systems that moved over the origin area prior to the start of the Creek Fire. The videos and photos contain radar data based on precipitation intensity (see exhibit 63, 2020-09-16-SIR-b 6 & b 7C)
September 17, 2020
On September 17, b6 & b7C on the Sierra National Forest was escorted by investigators and conducted an inspection of the snag tree within the specific origin area previously identified by origin and cause investigators. The tree in question had been partially consumed by fire and felled on September 14 due to the hazard it posed to personnel conducting the investigation in the area. The tree in order to identify the species, the estimated height prior to

Based on observations, she determined the species of the tree was a Douglas Fir. The remains of the tree measured at approximately 94"-8" with no true top present. estimated the diameter breast height (DBH) to be between 45-48".

burning, and to determine whether the tree was live or dead at the time of the ignition of the Creek Fire (see exhibit 64, 2020-



Case/File Number

(Reference FSH 5309.11)

20-05-MAMP0J1

determined the tree was likely dead when the Creek Fire started. Additionally, did not observe any obvious signs of lightning inflicted wounds that were outwardly apparent on the tree (see exhibit 65, 2020-09-17_Tree Report_56.8 b7C)

September 22, 2020

On September 22, SA accessed the origin area of Creek Fire on foot. Due to rumors circulating that the cause of the Creek Fire was associated with a marijuana cultivation site, SA hiked areas surrounding the origin of the Creek Fire, which had not been previously hiked by investigators, in an attempt to identify if there was a cultivation site in the surrounding area. SA first hiked the unnamed drainage just south and east of the Creek Fire origin area and did not observe signs of recent cultivation activity. Additionally, SA hiked up Sheep Thief Creek from its confluence with Big Creek up towards Stump Springs Road and did not observe any signs of recent cultivation activity. Lastly, SA hiked down drainage along the southern side of Big Creek from the Creek Fire origin and did not observe recent signs of cultivation activity.

September 24, 2020

On September 24, SA conducted a registration check on the woodchipper that was located on the two-track road above the origin area of the Creek Fire. The woodchipper had been burned as a result of the Creek Fire. Additionally, there were signs of recent hazard fuels removal activity along the powerlines near the chipper. The woodchipper came back registered to Mowbray's Tree Service in San Bernardino, CA. SA believed Mowbray's was contracted by SoCal Edison to conduct vegetation removal along their powerlines and infrastructure.

SA bfC contacted bf & bfC, a Senior Utility Forest for SoCal Edison. bf & bfC on August 22, 2020. The email indicated he had crews in the area of Big Creek, within the Musick Project area, cutting brush and small trees. During my conversation with bf & bfC I requested contact information for the crew working with the chipper down on the two-track road behind the Camp Sierra dumpster. bf & bfC indicated he would reach out to the contractor, Mowbray's, to see if there were any crews working in the area on the day the Creek Fire started.

also spoke with 6 & b7C, a Lightning Technical Support Specialist with Vaisala. CoreLogic STRIKEnet reports are generated using data obtained from Vaisala's National Lightning Detection Network (NLDL). SA reached out to Vaisala, requesting them to review lightning data in the area of the Creek Fire prior to the time the Creek Fire was reported. advised SA also provided SA the task of reviewing the data would involve such an exponential amount of data that it would not be feasible. also provided SA with information regarding the reliability of Vaisala's sensors to detect lightning activity. According to Vaisala's National Lightning Detection Network (NLDN) is capable of detecting approximately 70-80% of cloud-to-ground lightning strokes. Additionally, the NLDN detects approximately 90-95% of all cloud-to-ground lightning flash contains multiple lightning strokes) (see exhibit 66, 2020-09-24_MOA_D66 & b7C

September 25, 2020

On September 25, b6 & b7C

all cabin owners in the Camp Sierra Tract. SA b6 & b7C

of Camp Sierra. SA b6 & b7C

indicated there were four rentals that weekend, predominately consisting of groups with young children. b6 & b7C indicated three of the four groups had checked in prior to the fire starting. b6 & b7C did not have contact information for the renters available, because it is still at Camp Sierra.

MEST STON
VIIA C
【ひ手ひ】
Depart of March

REPORT OF INVESTIGATION

(Reference FSH 5309.11)

Case/File Number

(see exhibit 67, 2020-09-

20-05-MAMP0J1

Also on September 25, b6 & b7C , a claims specialist with SoCal Edison, contacted SA b6 & b7C provided with the contact information for b6 & b7C for Mowbray's Tree Service. b6 & b7C indicated b6 & b7C would be able to get SA b6 & b7C into contact with the crew leader and crew members associated with the woodchipper that was located on the two-track road above the Creek Fire origin.

sab6 & b7C, b7E

25 MOA DO & D/C

September 27, 2020

On September 27, SA b6 & b7C, b7E

. Assistant

United States Attorney's Office-Fresno for review. Additionally, SA b6 & b7C, b7E

September 28, 2020

On September 28, SA below the with below bounded by the below bounded by the below bounded by the below by t track road that leads to the origin area, on the day the Creek Fire started. The Mowbray's crewmembers were working along the transmission lines near Camp Sierra; however, they were along Huntington Lake Road.

One of the Mowbray's crewmembers showed SA the online mapping database used to track tree and vegetation projects. Some work had been completed in the area of the access road; however, it was well prior to September 4. There were some points on the mapping database in the area of the two-track road that had been edited at 0533 hours September 4, but they were not associated with Mowbray's. The identifiers associated with the edits were b6 & b7C and b6 & b7C

Regarding the woodchipper located on the two-track road, b6 & b7C indicated they would sometimes leave chippers in various locations and use them as needed. Additionally, b6 & b7C indicated Mowbray's employ's sub-contractors and sometimes the sub-contractors will lease equipment from Mowbray's. b6 & b7C indicated it was possible that sub-contractors may have been working down on the access road where the chipper was located. b6 & b7C also indicated there were two sub-contracted companies working in the area, ITM (International Tree Management) and Unlimited Tree Service. b6 & b7C agreed to check with the Mowbray's sub-contractors to determine if they had been working on the two-track road where the woodchipper was located (see exhibit 68, 2020-09-28 MOA b6 & b7C

October 28, 2020

On October 28, SA **b6 & b7C**, **b7E**

November 5, 2020

On November 5, SA b6 & b7C, b7E



REPORT OF INVESTIGATION (Reference FSH 5309.11) Case/File Number

20-05-MAMP0J1

November 6, 2020

On November 6, SA b6 & b7C, b7E

December 14, 2020

On December 14, SA b6 & b7C, b7E

December 15, 2020

On December 15, SA b6 & b7C, b7E

December 25, 2020

On December 25, b6 & b7C, b7E

January 3, 2021

On January 3, b6 & b7C, b7E

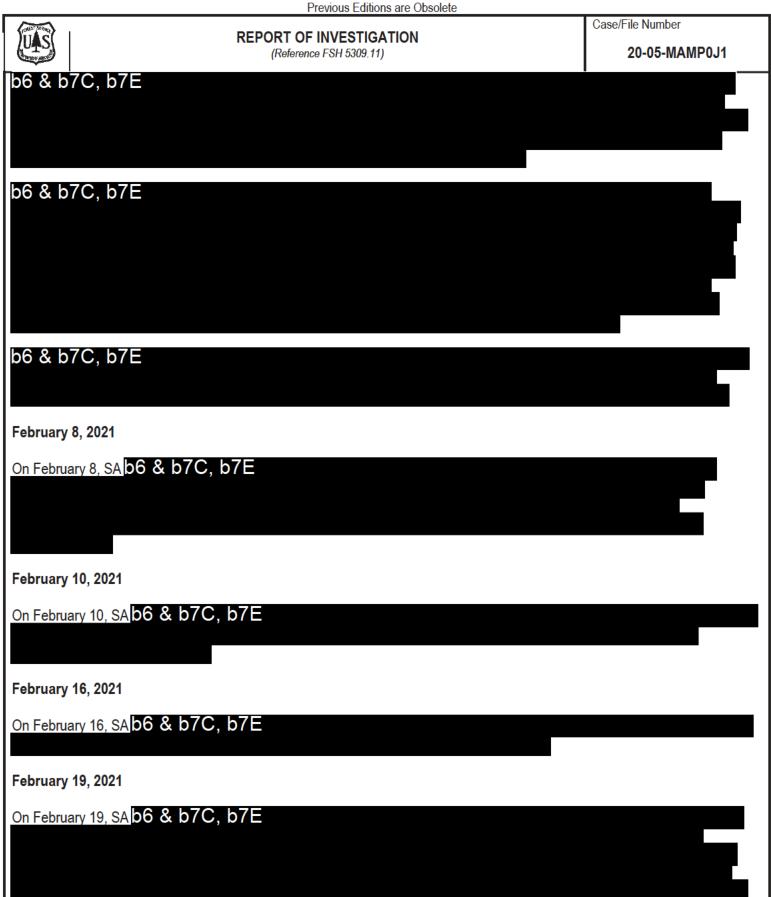
January 27-28, 2021

On January 27, b6 & b7C, b7E

On January 27-28, SA b6 & b7C, b7E

February 5, 2021

On February 5, b6 & b7C, b7E





REPORT OF INVESTIGATION (Reference FSH 5309.11) Case/File Number

20-05-MAMP0J1

b6 & b7C, b7E

February 26, 2021

On February 26, SA b6 & b7C, b7E

March 19, 2021

On March 19, SA b6 & b7C, b7E

Additionally, SA b6 & b7C, b7E

March 23, 2021

On March 23, SA b6 & b7C, b7E

April 1, 2021

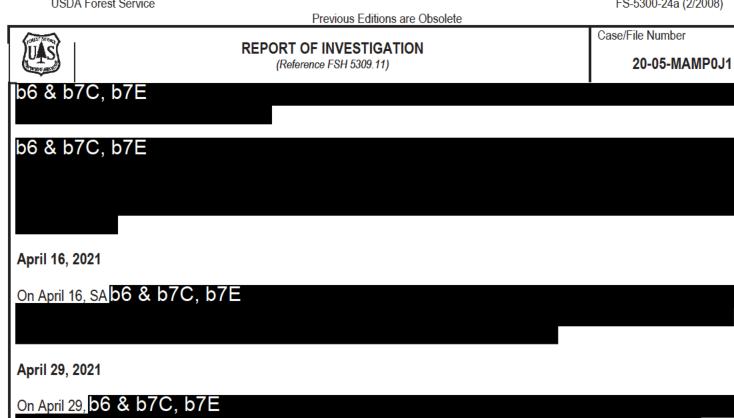
On April 1 SA b6 & b7C, b7E

April 13, 2021

On April 13, b6 & b7C, b7E

April 15, 2021

On April 15, SA b6 & b7C, b7E



CONCLUSION

CAUSE DETERMINATION:

Excluded Cause Categories:

Based on information identified during the investigation and observations made within the Creek Fire origin area, investigators excluded a number of cause categories, including: equipment use, campfire, debris burning, railroad, children, and the categories falling under miscellaneous (power lines, fireworks, cutting, welding, grinding, firearms use, blasting, structures, glass reflection/refraction, spontaneous combustion, and flare stacks/fire pits).

Included Possible Cause Categories:

Smoking

Investigators were not able to exclude smoking as a possible cause of the Creek Fire. The Guide to Wildland Fire Origin and Cause Determination handbook identifies the cause category of smoking as wildfires caused by smoking activities or accoutrements, including matches, cigarettes, cigars, pipes, illegal substances, etc. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 207, (2016). In determining the probability of a cigarette as a competent ignition source, investigators consider the following: physical characteristics of the cigarette, environmental factors, physical placement factors. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 207, (2016). Cigarette ignition factors are 0% RH, Start Likely; 10% RH, Start Possible; 18% RH, Start Unlikely; and 22% RH, No Start. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 208, (2016). Environmental factors include: finely particulate fuel bed, loose fuel arrangement, fine dead fuel moisture (FDFM) less than 14%,



(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

80°F + ambient temperature, microclimate location (temperature at ground level vs. temperature at higher level), Relative Humidity (RH) of 22% or less. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 208, (2016).

The environmental factors within the identified origin area of the Creek Fire were within the parameters required for smoking to be considered as a possible cause. The weather recorded by fire suppression personnel at 2000 hours on September 4, 2020, was as follows: temperature 80 °F, relative humidity 20%, and winds 0-5 mph out of the southeast. Additionally, the weather recorded at a Southern California Edison weather station in Big Creek, CA at 1820 hours on September 4, 2020, was as follows: temperature 80 °F, relative humidity 20%, and winds 3 mph out of the west. The ground fuel bed in the area of the origin was a combination of light annual grasses mixed with leaf litter along with areas containing a heavy duff layer consisting of pine needles, leaves and twigs. The fine dead fuel moisture for the Sierra National Forest is currently at critical levels, well below 14%.

There was no physical evidence located within the origin area of the Creek Fire to support smoking as a probable cause. However, USFS FEO **b6 & b7C** indicated he observed hatchet marks on vegetation as well as cigarette butts as he was initially gaining access to the Fire. Additionally, investigators observed areas within the general origin where re-burn may have occurred due to rolling debris downhill, indicating that portions of the origin area may have burned a second time after the Creek Fire initially started. Subsequent follow-up investigation into the Creek Fire has failed to identify the presence of a subject/s in or around the origin area for a time period of 12 hours before and immediately after the Creek Fire was reported (from 0700 hours to 1900 hours on September 4, 2020).

Arson/Incendiary

Investigators were not able to exclude arson/incendiary as a possible cause of the Creek Fire. The Guide to Wildland Fire Origin and Cause Determination handbook identifies the cause category of arson/incendiary as wildfires deliberately or maliciously set with the intent to damage or defraud. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 215, (2016). Arson is more specifically defined as the intentional and wrongful burning of someone else's property or one's own property (as to fraudulently collect insurance). (Garner, 2009) "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 299, (2016). Incendiary is more specifically defined as deliberately and unlawfully setting fire to property. (Garner, 2009) "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 299, (2016). These terms are often used interchangeably.

No evidence specifically supporting arson/incendiary was located within the origin of the Creek Fire. However, due to the fact there was not conclusive data, physical evidence, or witness accounts of lightning activity in the area, investigators cannot rule out the possibility that the Creek Fire was caused by arson/incendiary. The Guide to Wildland Fire Origin and Cause Determination handbook indicates the majority of wildland arson fire scenes are accessed by motor vehicles due to the low risk of access and egress (PMS 412, Chapter 7, page 303). The Creek Fire origin was not accessible by vehicle and would have required a suspect to hike in a significant distance, with an increased risk and exposure during egress from the area. The follow-up investigation into the Creek Fire has failed to identify the presence of a subject/s in or around the origin area for a time period of 12 hours before and immediately after the Creek Fire was reported (from 0700 hours to 1900 hours on September 4, 2020).

Included Probable Cause Category:

Lightning

Investigators ultimately concluded lightning is the probable cause of the Creek Fire. The Guide to Wildland Fire Origin and Cause Determination handbook identifies the cause category of lightning as any wildland fire started as the result of lightning activity. Lightning occurrence maps are a significant tool to be utilized in suspected lightning caused fires. Lightning is



(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

discharged static electricity associated with thunderstorm activity. Lightning is typically a series of short bursts approximately two inches in diameter, lasting for about one-half second. These lightning discharges include cloud-to-ground strikes which are in the range of 100 million volts, 200,000 amperes, and 54,000 °F. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 197, (2016). The circumstances indicating a possible lightning strike as a cause includes recent electrical storm (hours/days/weeks) activity in the area, the presence of indicators of sleepers and holdovers, scarring on trees or snags, precipitated sap, needle shower, ballistic penetration of adjoining vegetation by needles and small twigs or splinters, blow-holes at base of tree, fulgurites, and splintered wood or vegetation. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 197, (2016).

Investigators initially examined lightning activity data provided to them by Sierra National Forest Dispatch (obtained through the BLM Lightning Services Database) on September 5, 2020. The data obtained from the BLM Lightning Services Database indicated there had been no lightning activity near or surrounding the Creek Fire origin area for the previous seven days. Additionally, SA retrieved lightning data from Earth Networks. According to Earth Networks, there were four lightning strokes in the general area between August 21, 2020 (00:00 PDT) and September 4, 2020 (23:55 PDT). All of the lightning strokes detected by the Earth Networks system occurred on August 24, 2020. Only one of those four strokes detected by Earth Networks was cloud to ground and all the strokes detected were over eight miles away from the origin area of the Creek Fire.

also retrieved STRIKEnet lightning data reports from CoreLogic to determine if lightning activity was present at or near the identified origin area of the Creek Fire. CoreLogic STRIKEnet reports use data from Vaisala's National Lightning Detection Network (NLDN). Vaisala identifies their NLDN network as being the most comprehensive lightning strike archive database in North America. According to Vaisala, their NLDN is capable of identifying approximately 70-80% of all cloud-to-ground strokes that occur. Additionally, Vaisala's NLDN is able to detect approximately 95% of all cloud-to-ground lightning flashes that occur. A "lightning stroke" is a lightning discharge that connects a charge region in a cloud to the ground. A "lightning flash" consists of one or more cloud pulses and/or cloud-to-ground strokes that typically occur within one second (https://www.vaisala.com/sites/default/files/documents/Lightning-Booklet.pdf). According to the STRIKEnet report for Saturday August 22, 2020 (00:00 PDT) through Friday September 04, 2020 (23:59 PDT), there were three cloud-to-ground lightning strokes detected within a fifteen-mile radius of the identified origin area for the Creek Fire. All three of the strokes occurred on the morning of August 24, 2020, and were over eleven miles away from the origin area of the Creek Fire. According to the STRIKEnet report for Saturday August 8, 2020 (00:00 PDT) through Friday August 21, 2020 (23:59 PDT), there were four cloudto-ground lightning strokes detected within a fifteen-mile radius of the identified origin area for the Creek Fire. The four strokes identified during this timeframe all occurred on August 17, 2020, and were over twelve miles away from the origin area of the Creek Fire. According to the STRIKEnet report for Saturday July 25, 2020 (00:00 PDT) through Friday August 7, 2020 (23:59 PDT), there were three cloud-to-ground lightning strokes detected within a fifteen-mile radius of the identified origin area for the Creek Fire. The three strokes identified during this timeframe occurred on July 25-26, 2020, and were all over twelve miles away from the origin area of the Creek Fire. The CoreLogic STRIKEnet reports include maps identifying the locations of the recorded lightning strokes. Additionally, confidence ellipses for each stroke are identified on the map. The Lightning Confidence Ellipse Map indicates with 99% certainty that the recorded lightning even contacted the ground within the bounds of the ellipse.

Based on the rate of error for the National Lightning Detection Network (capable of identifying approximately 70-80% of all cloud-to-ground strokes that occur and approximately 95% of all cloud-to-ground lightning flashes that occur), it is possible that undetected lightning activity did occur within the Big Creek drainage. If this were true, it would have most likely occurred during the early morning hours of August 24, 2020, when a significant lightning storm developed off the Pacific Ocean and moved inland during the overnight hours. It is not uncommon to discover "sleeper" or "holdover" fires caused by lightning several days or even weeks after a lightning event; however, it requires the presence of fuels capable of holding a smoldering fire for an extended period of time. In the area of the Creek Fire, the estimated live fuel moistures in the brush component were at approximately 60%, and 1000-hour fuel moistures for larger diameter downed timber was approximately 6%. Both of these fuel moistures are at critically dry levels.



(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

Witnesses interviewed during the investigation did not indicate the presence of lightning activity within the Big Creek area prior to the ignition of the Creek Fire. 6 & b7C , a USFS Fire Patrol assigned to the Big Creek station, indicated he had not observed any lightning activity in the area of the Big Creek drainage during the entire summer. 6 & b7C , a resident of Big Creek and a Cal Fire firefighter, also indicated there hadn't been any lightning activity and the area had been "bone dry".

b6 & b7C , USFS Mt. Tom lookout, indicated the monsoonal thunder and lightning storms that typically develop on the crest of the Sierra Nevada mountain range do not typically reach the area of Big Creek. Additionally, a review of camera footage from the Meadow Lakes Fire Detection Camera (part of the Alert Wildfire camera system) determined the area was hazy but moderately clear during the time prior to the Creek Fire starting. The time period the footage was reviewed covered September 2, 2020 through September 4, 2020.

Lightning has ultimately been identified as the probable cause of the Creek Fire for four reasons:

- 1) Investigators obtained a photograph by a witness showing significant fire activity in the upper portion of a tree during the early stages of the fire. The photograph in question was taken by approximately one hour and six minutes after the Creek Fire was initially reported. The photograph in question was taken by approximately one hour and six minutes after the Creek Fire was initially reported. The photograph in question was taken by approximately one hour and six minutes after the Creek Fire was initially reported. The photograph in question was taken by a to 1924 hours on September 4, 2020, approximately one hour and six minutes after the Creek Fire was initially reported. The photograph in question was taken by a to 1924 hours on September 4, 2020, approximately one hour and six minutes after the Creek Fire was initially reported. The photograph in question was taken by a to 1924 hours on September 4, 2020, at 1924 hours on September 4, 2020, approximately one hour and six minutes after the Creek Fire was initially reported. The photograph is to 1924 hours on September 4, 2020, at 1924 hours on September 4, 2020, approximately one hour and six minutes after the Creek Fire was initially reported. The photograph is to 1924 hours on September 4, 2020, at 1924 hours
- The significant fire activity in the identified snag tree was not equivalent to the fire activity within the remainder of the fire perimeter during the initial stages of the fire. USFS b6 & b7C described his initial observation of the fire as being a small wisp of smoking turning into a column. b6 & b7C indicated he could tell the fire had been a ground fire, but it was developing in the heavy jackpotted fuels. b6 & b7C who was observing the fire from the Big Creek SCE helipad, described the fire as being a smoke chimney with a single snag on fire. Helicopter 25M b6 & b7C indicated the fire was about ½ to 1 acre in size when he arrived. So specifically described the snag tree as having spots of fire along the snag from the ground up. Additionally, b6 & b7C indicated the light flashy ground fuels in the fire area had already been burned and only the larger diameter logs and fuels on the ground were burning.
- 3) Investigators located the tree identified in the above referenced photograph provided by Helicopter 25M b6 & b7C and identified by USFS FEO b6 & b7C within the origin area of the Creek Fire. Investigators photographed and closely examined the tree in question, which investigators identified as a large snag within the specific origin area. Investigators observed large quantities of tree branches scattered on the ground approximately 10-15 feet northeast of the snag, in an area where backing fire indicators were observed. Scattered tree debris is an indicator of a lightning struck tree; however, in some instances these remains will be consumed by the fire. The large snag in question was one of the trees that posed a hazard to investigators and was felled on September 14, 2020. After it was felled investigators conducted a closer examination of the tree and the area immediately surrounding the tree. There was a distinct "V" shaped spiral down the remaining surface of the tree; however, due to the significant fire damage and consumption, investigators were not able to determine if the "V" shaped spiral was a lightning pathway or as a result of



(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

the tree being impacted by fire for an extended period of time. Additionally, no fulgurites were located in the area surrounding the snag tree.

4) During the initial origin and cause investigation and the subsequent follow-up investigation, no subject/s has been identified as being in or around the Creek Fire origin area. SA b7C, b7E

Additionally, SA b6 & b7C, b7E

Ultimately, investigators have exhausted all available leads and resources in an attempt to identify subject/s that were in the vicinity of the Creek Fire origin prior to and shortly after the fire was reported. At this time, no subject/s have been identified. Based on the above facts, along with the fact that no physical evidence was located to support any other fire cause categories as the probable cause of the Creek Fire; investigators have determined that lightning is the probable cause.

Future leads or information obtained related to the cause of the Creek Fire may result in a change of this conclusion.

JUDICIAL ACTION

- On October 28, 2020, SA b6 & b7C, b7E
- On November 5, 2020, SA b6 & b7C, b7E
- On December 14, 2020, SA b6 & b7C, b7E
- On January 12, 2021, SA b6 & b7C, b7E



REPORT OF INVESTIGATION (Reference FSH 5309.11) Case/File Number

20-05-MAMP0J1

On February 19, 2021, SA b6 & b7C, b7E

On March 19, 2020, SA b6 & b7C, b7E

On March 19, 2021, SA b6 & b7C, b7E

On June 3, 2021, SA b6 & b7C, b7E

• On June 3, 2021, SA b6 & b7C, b7E

EXHIBITS

Exhibit #	Description of Exhibits	Page
1	2020-09-15_MOI b6 & b7C	
2	2020-09-07_MOI b6 & b7C	
	Attachment 1.b6 & b7C_Google Earth Image	
3	2020-09-05_SIR_b6 & b7C	
	Attachment 1-Sierra Dispatch Initial Origin Map	
	Attachment 2-Sierra Dispatch CAD Run Card	
	Attachment 3-Sierra Dispatch Lightning Maps	
4	2020-09-06_MOI AA15 b6 & b7C	
	Attachment 1-b6 & b7C Google Earth Image	
	Attachment 2-AA-15 Photograph	
5	2020-09-06_SIR-H25M ^{b6 & b7C}	
	Attachment 1-Map Screenshot	
	Attachment 2-GPS Coordinates of H25M Waterdrop	
6	2020-09-06_SIR-H534_b6 & b7C	
7	2020-09-06_SIR SCE phone call b6 & b7C	
8	2020-09-07_MOI Crew 3 b6 & b7C	
	Attachment 1-Photograph by b6 & b7C	
	Attachment 2-Photographs b6 & b7C	



(Reference FSH 5309.11)

Case/File Number

20-05-MAMP0J1

WHO WEST		(Reference FSH 5309.11)	20-05-MAMP0J1
	_	Attachment 3-Photographs Attachment 3-Photographs	
		Attachment 4-GPS Tracks Google Earth, Avenza, and Raw Files	
		Attachment 5-Recording of Interview b6 & b7C	
		Attachment 6-Crew Photos	
	9	2020-09-07_MOI b6 & b7C	
Γ		Attachment 1 b6 & b7c Video	
	10	2020-09-07_MOI Crew 4 b6 & b7C	
		Attachment 1-b6 & b7C Avenza Screenshot	
L		Attachment 2-Crewmember b6 & b7C Video	
		 Attachment 3-Weather Observations from Crewmember b6 & b7C 	
		Attachment 4-Recording of Interview b6 & b7C	
	11	2020-09-07_MOI b6 & b7C	
	12	2020-09-07_MOI b6 & b7C	
		Attachment 1 b6 & b7C - Facebook photo	
	13	2020-09-07_MOID6 & b7C	
		Attachment 1 Photographs	
	14	2020-09-07_MOI b6 & b7C	
		Attachment 106 & b7C Recorded Interview	
-	15	2020-09-07_MOI b6 & b7C	
-		Attachment 1 -Email-RE Music Project Information	
-		Attachment 2- Email-FW Blue flags being moved neat Transmission	line
L		Attachment 3-base 576 Email-Musick Arch and Wildlife map	
L		Attachment 4 Email-FW Enterprise and Musick tour #2	
	16	2020-09-07_FSO 911_b6 & b7C	
L		Attachment 1-Fresno SO Request for Information Law Enforcement-CREE	EK Fire
L		Attachment 2-Email-RE 911 recordings request form	
-		Attachment 3-FSO Creek Fire phone calls	
-	17	2020-09-07_MOI b6 & b7C (H25M b6 & b7C	
-	18	2020-09-08_MOI b6 & b7C	
-		Attachment 1	
-	40	Attachment 2 photographs Attachment 2 photographs	
-	19	2020-09-08_MOI Rb6 & b7C 2020-09-08_ ^{b6 & b7C} and b6 & b7C	
-	20		
-		Attachment 1-Recorded Interview	
-		 Attachment 2-b6 & b7C photos Attachment 3-b6 & b7C photos 	
-			
-	21	2020-09-08_MOI b6 & b7C 2020-09-10_CHP 911_b6 & b7C	
	22		
-		Attachment 1-Email_RE Creek Fire 911 Info Attachment 2 CHR Creek Fire 2000055500119	
-	22	Attachment 2-CHP Creek Fire 200905FR00118 2020-09-10_MOI b6 & b7C	
-	23		
-	24	Attachment 1-Camp Sierra Trail Camera Photos 2020-09-11_SIR_b6 & b7C	
	24		

		Previous Editions are Obsolete	Case/File Number	
)ÜAS		REPORT OF INVESTIGATION		
Game week)	(Reference FSH 5309.11)	20-05-MAMP0J	1
	25	2020-09-15_MOI ^{b6 & b7C} Photos_b6 & b7C		1
		Attachment 1 b6 & b7C photos		1
	26	2020-09-15 MOI b6 & b7C		1
l	27	2020-09-15_MOI b6 & b7C		1
li	28	2020-09-15 MOI b6 & b7C Photos b6 & b7C		1
l i		Attachment 1 b6 & b7C photos 2020-09-15_MOI b6 & b7C Photos_b6 & b7C		1
	29	2020-09-15 MOI b6 & b7C Photos b6 & b7C		1
		Attachment 1-b6 & b7C photo and videos		1
	30	FS-5300-45_Wildland Fire Origin and Cause Report		1
		Attachment 1-Creek Fire Origin & Cause Photographs		1
		Attachment 2-Raws weather SCE point		1
li		Attachment 3-Raws weather SCE point (2 weeks)		1
		Attachment 4-CoreLogic Lightning Maps		1
l t	31	2020-09-06_SIR_b6 & b7C		1
	32	2020-09-06_Daily Log_b6 & b7C		1
	33	2020-09-07_Daily Log		1
li	34	2020-09-07_Daily Log_		1
	35	2020-09-07_SIR_b6 & b7C		1
[36	2020-09-08_SIR_]
[37	2020-09-08_daily log_b6 & b7C		
	38	2020-09-08_Daily Log_b6 & b7C]
		Attachment 1-Sierra NF Dispatch recording]
		Attachment 2-Sierra NF CAD Run Card]
		Attachment 3-Cal Fire Dispatch recording		
		Attachment 4-Cal Fire CAD Run Card		
[39	2020-09-09_SIR_b6 & b7C]
		Attachment 1-Camp Sierra trail photos]
	40	2020-09-09_Daily Log_b6 & b7C]
	41	2020-09-09_Daily Log_		_
	42	2020-09-09_CoreLogic Lightning Maps_b6 & b7C		1
	43	2020-09-10_Daily Log_b6 & b7C		1
	44	2020-09-10_Daily Log		1
	45	2020-09-10_SIR_b6 & b7C		1
	46	2020-09-10_MOI b6 & b7C	& b7C	4
	47	2020-03-10 Report-Lartif Networks Lightning Map 002 12020-03042020	Q. 5/ C	-
	48	2020-09-10_CoreLogic Lightning Maps_b6 & b7C		-
	49	2020-09-11_Daily Log b6 & b7C		-
	50 51	2020-09-11_Daily Log		-
	ונ	2020-09-12_Daily Log_		-
	50	Attachment 1-ALERT Wildfire Camera 2020-09-12_Daily_Log_b6 & b7C		-
	52 53	2020-09-12_Daily Log_be & b7C		-
	53 	2020-09-12_SIR_b6 & b7C 2020-09-13_Daily Log_b6 & b7C		1
	54	2020-03-13_Dally Log_bota by 6		

		Previous Editions are Obsolete	Lo (ELN)
(CARTING)	ı	REPORT OF INVESTIGATION	Case/File Number
Denie His		(Reference FSH 5309.11)	20-05-MAMP0J1
		h6 & h7C	<u> </u>
I ⊢	55	2020-09-13_Daily Log b6 & b7C	
I ⊢	56	2020-09-13_SIR_b6 & b7C	57G
I ⊢	57	2020-09-14_SIR_Tree Falling and Photographs from Big Creek Helipad_	
I ⊢		Attachment 1-Photographic Log and Photographs 2020-09-14_Daily Log_b6 & b7C	
I	58	2020-09-14_Daily Log_b6 & b7C	
I	59	2020-09-14_Daily Log_b6 & b7C	
	60	2020-09-15 SIR-Collection of Charred Root Debris-	
l L		Attachment 1-Inventory of Impounded Property	
l L	61	2020-09-15_Daily Log_b6 & b7C	
l L	62	2020-09-15_Daily Log b6 & b7C	
	63	2020-09-16_SIR_b6 & b7C	
		 Attachment 1-Precipitation radar videos_8-23 and 8-24 	
	64	2020-09-17_SIR- ^{50 & 57C} -Tree Cruise- ^{16 & 57C}	
	65	2020-09-17_Tree Report b6 & b7C	
	66	2020-09-24_MOA_b6 & b7C	
		Attachment 1-woodchipper registration	
	67	2020-09-25_MOA_b6 & b7C	
		Attachment 1—Camp Sierra_Site Holders	
		Attachment 2—57 E	
		• Attachment 3— 57 E	
	68	2020-09-28 MOA DD & D/C	
I ⊢	69	2020-10-28 b7E documents b6 & b7C	
	70	2020-11-05 b7E Non-disclosure order documents b6 & b7C	
I	71	2020-11-06 b7F submission confirmation b6 & b7C	
	72	2020-12-14 b7 E documents b6 & b7 C	
I	73	2020-12-15 b7 submission confirmation b6 & b7 C	
	74	2020-12-25 b6 & b7C b7F	
	75	2021-01-03_b7E, b6 & b7C	
	76	2021-01-12 b7F b6 & b7C	
	77	2021-01-12_b7E, b6 & b7C	
	78	2021-01-27 b7F b6 & b7C	
	79	2021-01-28 b7 E MOA DO & D7C	
-	80	2021-02-05 b7E, b6 & b7C	
I ⊢	81	2021-02-08 b7F b6 & b7C	
-	82	2021-02-09 b7E MOA b6 & b7C	
-		Attachment 1-b7E	
 	83	2021-02-10 b7E request bo & b7C	
-	84	2021-02-10 b7E request b & b 7C 2021-02-19 b7E , b6 & b7C Detail Report b 6 & b 7C	
 ⊢	85	2021_02_19 b7 F	
⊢	86	2021-02-19_b7E, b6 & b7C	
⊢	87	2021-03-19 b7E, b6 & b7C	
⊢	88	2021-03-19_b7E, b6 & b7C	
⊢	89	2021-03-23 b7E submission confirmation b6 & b7C	
⊢	90	2021-04-01 b7E submission confirmation b6 & b7C	
	30	SUDITION CONTINUINGUIT	

UAS Pensus		REPORT OF INVESTIGATION (Reference FSH 5309.11)	Case/File Number 20-05-MAMP0J1
	91	2021-04-13_ b7E records_b6 & b7C	
	92	2021-04-15_ b7E MOA_b6 & b7C	
		 Attachment 1— Attachment 2— b6 & b7C, k 	37E
		• Attachment 2— OO X D I C, I	
		Attachment 3—	
		Attachment 4—	
	93	2021-04-16_ b7E letter b6 & b/C	
	94	2021-04-29_b7E records_b6 & b7C	
	95	2021-05-24_b7E return_b6 & b7C	
	96	2021-05-24_b7E return_b6 & b7C	

NOTE: This document is for OFFICIAL USE ONLY. It and its contents are not to be distributed outside your agency, nor duplicated, without prior approval of the USDA, Forest Service, Law Enforcement and Investigations.