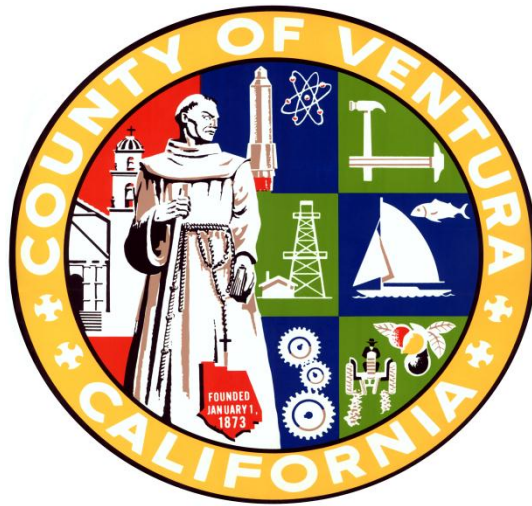


Ventura County Grand Jury 2013 - 2014



Final Report

Firefighting Air Assets: The Camarillo Springs Fire

May 14, 2014

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Firefighting Air Assets: Camarillo Springs Fire



Photo: Richard Gillard, *Acorn Newspapers*, May 9, 2013

Summary

On May 2, 2013, at 6:34 a.m., the Ventura County Fire Department (VCFD) responded to a brush fire adjacent to the Conejo Grade on very steep terrain along Highway 101. The Camarillo Springs Fire, which later became known as the Springs Fire, was fanned by unseasonably high Santa Ana winds, and with drought-induced dry brush and vegetation, the fire eventually engulfed 24,251 acres over a three-day period. It was stopped as it approached the beach communities along Pacific Coast Highway and the ocean, known as the Great Pacific Fire Break. The total costs charged to fight the fire were \$11,754,000. The majority of those costs were other agencies' responsibilities. The VCFD cost was approximately \$150,000.

The first-arriving firefighting helicopter from the County of Ventura Sheriff's Department (VCSD) attacked the fire and additional firefighting helicopters were requested. Due to two VCSD helicopters being unavailable because of maintenance, the next-arriving helicopter was a mutual-aid fire department helicopter that arrived more than 45 minutes after the request. By then, the fire had grown beyond the on-scene helicopters' and ground crews' abilities to contain it. Some first responders believe that had there been a second VCSD

helicopter available and dispatched at the initial response, the fire could have been stopped sooner.

The VCSD helicopters are between 39 and 45 years old and are “legacy” aircraft. Parts are becoming scarce for these helicopters. The 2013–2014 Ventura County Grand Jury (Grand Jury) found the practical remaining lifespan of these helicopters is about ten years. There is a need for additional and newer helicopter capabilities for the VCSD.

Multiple agency jurisdictions impact the ability to respond to all fires with all available resources. The Southern California Geographic Area Coordination Center dispatch facility in Riverside is in charge of all regional equipment and resources. The allocation of large air tanker resources must be done by the National Interagency Fire Center (NIFC), a federal government agency in Boise, Idaho. Early into the fire, the Governor of California approved California Air National Guard (CANG) C-130Js for air support.

The Grand Jury found that failings in the system, outside of Ventura County (County), contributed to the growth of the fire and the ability to fight it properly from the air. The Grand Jury found there is a systemic bias by federal firefighting authorities against the use of military aircraft despite diminishing commercial resources. Over the last ten years, the Forest Service fleet of 47 aging tankers has been reduced to 12 operational commercial planes. The Grand Jury found that there was, and continues to be, a need for additional local firefighting and rescue helicopter capabilities.

The Grand Jury found that VCSD helicopters are legacy aircraft, built between 1969 and 1975. Parts are becoming scarce and mechanics and pilots with experience with these aircraft are becoming harder to find. The practical remaining useful lifespan of these helicopters is about ten years.

The Grand Jury recommends that the Ventura County Board of Supervisors (BOS) fund one replacement helicopter and provide at least one more helicopter mechanic and an additional pilot for the VCSD.

The Grand Jury recommends that the BOS establish a capital expenditure fund, added to yearly, for the replacement of the legacy assets within the next ten years or as replacement aircraft become available. The unavailability of the Huey helicopters leaves only the next generation of helicopters, possibly Blackhawks, as replacement for the Hueys. The cost for these helicopters (acquisition, maintenance mechanics, and pilots) will be significantly higher than the County has experienced using Hueys.

The Grand Jury recommends that the BOS fund the immediate refurbishment of the smaller VCSD Bell 206 Long Ranger. This helicopter would be used as a patrol helicopter, saving wear and tear on the existing legacy fleet until newer helicopters are added to the fleet.

The Grand Jury found there is exceptional interagency cooperation and support, from the top down, between the VCSD and the VCFD administrations. The residents of the County can be proud of the actions and abilities of these departments, especially during the Springs Fire.

Background

The State of California (State) has been experiencing a dramatic change in weather patterns. The year 2013 had just three inches of measured rain in the Los Angeles area, the lowest rainfall total since records have been kept. Wildfires in the County appear to be changing in time and frequency. Fire seasons will likely become longer and more severe. The fire season in the western states is now 78 days longer, on average, than it was in the 1980s and the number of acres burned has doubled since the 1960s. [Ref-01, Ref-02, Ref-03]

County lands and firefighting resources are from multiple jurisdictions with varying rules, regulations, and philosophies. This is particularly evident in the accessibility of air resources. The Grand Jury researched the process for the release of CANG C-130s and the general process for the release of equipment and manpower when fighting wildfires in the County. Mutual aid agreements with surrounding counties' fire departments and other agencies allow for shared resources during specific events. The California Department of Forestry and Fire Protection (Cal Fire) coordinates the resources of the State, facilitating shared resources. [Ref-04, Ref-05, Ref-06] Requests for larger air tankers must be approved by the NIFC in Boise, Idaho. [Ref-07, Ref-08]

Per the 1932 Economy Act, federal government regulations require that all private resources be exhausted before federal government resources may be allocated. Over the last ten years, the US Forest Service fleet of 47 aging tankers has been reduced to 12 operational commercial planes. Article 1535 allows federal departments (e.g. NIFC) to ask for assets from another federal department only if they cannot be "conveniently and cheaply" provided by commercial contractors. Civilian costs are more than military costs. By "self-cost," the military has become less costly, while commercial costs have risen. Article 1535 provides "Procedures for the use of interagency acquisitions to maximize competition, deliver best value to executive agencies, and minimize waste, fraud, and abuse." [Ref-09]

The VCSD has a fleet of four Bell Huey medium-lift helicopters. [Ref-10] Three are modified to the more powerful Super Huey configuration. Modifications to these helicopters mean fewer parts are interchangeable with standard Hueys. One of the fleet is outfitted as a search and rescue helicopter and, along with its pilot and crew, is usually unavailable for use in fighting fires. VCSD helicopters are responsible for firefighting in cooperation with VCFD in the County.

During a wind-driven brush fire, two helicopters are needed immediately. Firefighters have learned the advantage of the second helicopter at the initial stages of a wind-driven brush fire. With two helicopters, there is a good chance the fire can be stopped before it becomes a large campaign-style fire. [Ref-06, Ref-11, Ref-12]

Local fire departments and Cal Fire operate under guidelines that protect property and put the fire out. [Ref-05] The US Forest Service philosophy is to "manage fires within a threshold." [Ref-13]

Methodology

The Grand Jury conducted this investigation by:

- Researching laws and agencies controlling air assets;
- Researching the process for the release of C-130s to fight fires in the County;
- Researching the timeline recorded in the fighting of the Springs Fire;
- Interviewing individuals involved with firefighting air assets;
- Researching the availability and use of air firefighting equipment within the County; and
- Researching the number of mechanics available for support of helicopters and the number of pilots available to fly firefighting helicopters.

Facts

- FA-01.** The County has been experiencing drought conditions for the past three years and has been under extreme fire danger for most of the past year. [Ref-01, Ref-02, Ref-03]
- FA-02.** Multiple agency jurisdictions impact the ability to respond to all fires with all available resources. [Ref-04, Ref-05, Ref-06, Ref-07, Ref-08, Ref-12]
- FA-03.** The Southern California Geographic Area Coordination Center dispatch facility in Riverside is in charge of all regional equipment and resources. Part of the allocation of resources has to be done by NIFC, a federal government agency in Boise, Idaho. [Ref-07, Ref-08]
- FA-04.** Per the 1932 Economy Act, federal government regulations require that all private resources be exhausted before federal government resources may be allocated. Article 1535 allows federal departments (e.g. NIFC) to ask for assets from another federal department only if they cannot be “conveniently and cheaply” provided by commercial contractors. Civilian costs are more than military costs. By self-cost, the military has become less costly, while commercial costs have risen. Article 1535 provides “Procedures for the use of interagency acquisitions to maximize competition, deliver best value to executive agencies, and minimize waste, fraud, and abuse.” [Ref-09]
- FA-05.** Cal Fire believes in putting the fire out immediately, and if certain areas need a prescribed burn, it will be control-burned at a later date when weather and conditions permit it to be done safely. [Ref-05, Ref-06, Ref-19]
- FA-06.** The process of land management (controlled burns) in undeveloped land in the County is very difficult because of multiple jurisdictions and rules. [Ref-05, Ref-07, Ref-08, Ref-19]

- FA-07.** The VCFD is aggressively working to implement a “defensible space” policy, which has been very effective in protecting property. [Ref-19, Ref-20]
- FA-08.** The federal government’s Department of Forestry philosophy is to “manage fires within a threshold.” [Ref-13]
- FA-09.** The VCSD has four Bell Huey helicopters including two UH-1Hs, one 205B, and one 212. The VCSD fleet of helicopters is between 39 and 45 years old. [Ref-10]
- FA-10.** The County sends its helicopters to outside vendors for maintenance when they do not have mechanics available to service them.
- FA-11.** Two CANG C-130J air tankers and their refill base at Point Mugu were made available during the early stages of the Springs Fire by the Governor of California.
- FA-12.** The VCSD possesses a smaller seven-seat Bell 206 L-3 Long Ranger that is under refurbishment at the Camarillo Airport facility. Refurbishment has been slow because of a shortage of funds and manpower.
- FA-13.** The VCSD budget is an operating budget and lacks a capital budget to accommodate the purchase of additional air assets.
- FA-14.** If all air assets are operational, there is a need for an additional pilot.
- FA-15.** The cost to fight the Springs Fire was \$11,754,000. However, the majority of the costs were covered by state and federal agencies. The VCFD cost was about \$150,000.
- FA-16.** Some first responders believe that had there been a second VCSD helicopter available and dispatched at the initial response, the fire could have been stopped sooner.

Findings

- FI-01.** Failings in the system outside the County contributed to the growth of the Springs Fire and the ability to fight it effectively from the air. (FA-02, FA-03)
- FI-02.** There is a systemic bias by federal firefighting authorities against the use of military aircraft for firefighting. (FA-03, FA-04)
- FI-03.** The VCSD helicopters are between 39 and 45 years old and are legacy aircraft. Parts are becoming scarce for these helicopters. The practical remaining lifespan of these helicopters is about ten years. (FA-09)
- FI-04.** There is a need for additional and newer helicopter capabilities for the VCSD. There are no low-cost new or used replacement helicopters available. (FA-09, FA-10)
- FI-05.** Because of the age of the fleet, pilots and mechanics experienced with these helicopters are becoming harder to find. (FA-09, FA-10)

- FI-06.** The VCSD lacks an adequate number of helicopter mechanics to maintain their fleet. (FA-10)
- FI-07.** When all current helicopters are operational, there is an immediate need for one additional pilot for the VCSD. (FA-14)
- FI-08.** The BOS lacks a capital funding plan, outside of the Sheriff's operational budget, for VCSD helicopter replacement. (FA-13)
- FI-09.** The Bell Long Ranger helicopter refurbishment program is not adequately funded nor staffed. (FA-12)

Recommendations

- R-01.** The Grand Jury recommends that the VCSD hire at least one and probably two helicopter mechanics as soon as possible. (FI-05, FI-06)
- R-02.** The Grand Jury recommends that the VCSD hire an additional helicopter pilot. (FI-07)
- R-03.** The Grand Jury recommends that the BOS commit the necessary resources for the expedited completion of the Bell 206 L-3 Long Ranger refurbishment. (FI-09)
- R-04.** The Grand Jury recommends that the VCSD use the Bell Long Ranger for appropriate missions, to save wear and tear on the legacy fleet as well as reduce operational costs. (FI-09)
- R-05.** The Grand Jury recommends that the BOS establish a capital expenditure fund, added to yearly, designated for the replacement of the legacy aircraft within the next ten years or when appropriate aircraft become available. The unavailability of the Huey helicopters leaves only the next generation of helicopters, possibly Blackhawks, as replacement for the Hueys. The cost for these helicopters (acquisition, maintenance mechanics, and pilots) will be significantly higher than the County has experienced using Hueys. (FI-03, FI-04, FI-05, FI-08)
- R-06.** The Grand Jury recommends that the BOS fund a new replacement helicopter for the VCSD for use as a dedicated search and rescue vehicle. (FI-04, FI-08)

Responses

Responses required from:

County of Ventura, Board of Supervisors (FI-03, FI-04, FI-05, FI-06, FI-07, FI-08, FI-09) (R-01, R-02, R-03, R-04, R-05, R-06)

County of Ventura, Sheriff (FI-03, FI-04, FI-05, FI-06, FI-07, FI-09) (R-01, R-02, R-03, R-05, R-06)

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Attachments

Att-01. Aircraft Descriptions

Glossary

TERM**DEFINITION**

1932 Economy Act

Allows a federal government department to ask for assets from another federal department or agency

Article #1535 of the
1932 Economy Act

Allows assets from a federal department to be used by another federal department “unless civilian costs are less than military”

BOS

County of Ventura Board of Supervisors

Cal Fire

California Department of Forestry and Fire Protection serves and protects the people, property, and resources of California

CANG

California Air National Guard

County

County of Ventura

DOD

Department of Defense

Fox Field

General William J. Fox Field, Lancaster, California, air tanker refilling base

Grand Jury

2013-2014 Ventura County Grand Jury

Legacy Aircraft

Older aircraft that are handed down or purchased from other agencies

MAFFS

Modular Airborne Fire Fighting Systems, a self-contained unit that can be loaded onto a Lockheed C-130. MAFFS allows the aircraft to be used as an air tanker against wildfires. It usually drops a 3,000-gallon load of retardant.

Master Mutual Aid

Statewide mutual aid system that allows for the progressive mobilization of resources to and from emergencies.

Mutual Aid

The Unified Command of Ventura County: Fire Department, Sheriff’s Department, California Highway Patrol, and fire departments and emergency services from other cities in the County. Agreements with surrounding counties are included in the Mutual Aid sphere of influence.

NIFC

National Interagency Fire Center in Boise, ID. NIFC manages all large airplanes fighting fires in the country. The Boise Interagency Fire Center was created in 1965 to provide a

vehicle for interagency cooperation. The US Forest Service, Bureau of Land Management, and National Weather Service worked to reduce duplication of services, cut costs, and coordinate national fire planning and operations. The National Parks Service and Bureau of Indian Affairs joined in the mid-1970s. The US Fish and Wildlife Service joined in 1979 and the name was changed to NIFC. The US Fire Administration and Federal Emergency Management Agency joined in 2003.

Self-Cost

The expense of maintaining military facilities and military support services that are part of the general operation and are charged to the agency. The CANG C-130Js are an example of self-cost because they are operational at all times. Fire-fighting costs are minimized.

State

State of California

The Southern California Geographic Area Coordination Center

"...the focal point for coordinating the mobilization of resources for wildland fire and other incidents throughout the Geographic Area. Located in Riverside, CA, the Center also provides Intelligence and Predictive Services related-products designed to be use [sic] by the internal wildland fire community for purposes of wildland fire and incident management decision-making." [Ref-08]



VCFD

Ventura County Fire Department

VCSD

Ventura County Sheriff's Department

Attachment 01

Aircraft Descriptions

Grumman S-2T	The Grumman S-2 Tracker was introduced in 1954 as a carrier based anti-submarine warfare airplane for the US Navy. This type was retired from the Navy in 1976. It was originally powered by two Wright Cyclone R-1820 radial piston engines of 1,450 horsepower. The S-2T version now in service with Cal Fire is powered by two Garrett TPE331-14 GR engines of 1,650 horsepower each. It has a top speed of 270 mph and a range of 4.5 hours. It can drop 1,200 gallons of retardant at a time.
Lockheed P-2V	The P-2V Neptune was first introduced in 1947 as a land-based patrol bomber for the US Navy. This four-engine airplane is powered by two Wright Cyclone 18-cylinder piston radial engines of 3,700 horsepower each and two Westinghouse J-34 jet engines of 3,400 pounds of thrust each (two turning and two burning). It cruises at 174 mph and has a top speed of 313 mph. Its range is 3,903 miles. This type can drop 2,300 gallons of retardant at a time.
Bell Huey	This helicopter was designed in the 1950s for a United States Army requirement for a utility helicopter. It first flew in 1956. With a Lycoming T-53 turboshaft engine, it is the first turbine-powered helicopter ordered into production by the United States military. Over 7,000 served in Vietnam and 16,000 civil and military models have been built worldwide. The UH-1H/205 A-1 has a maximum gross weight of 9,500 pounds and a useful load approaching 4,000 pounds. The maximum speed is 135 mph and the cruise speed is 125 mph. The rate of climb is up to 1,755 feet per minute and it has a service ceiling of 19,390 feet. The maximum range is 315 miles. VCSD Hueys are equipped with a fixed water tank capable of 360-gallon water drops.
Super Huey	Super Hueys are modified Bell Huey single-engine helicopters that incorporate airframe and drive train changes, including the use of an 1,800-horsepower Lycoming turbine engine in place of the 1,400-horsepower Lycoming engine. The modification improves performance, especially during periods of high air temperatures and high altitudes or both. VCSD Super Hueys are equipped with a 360-gallon fixed water tank for firefighting.
Lockheed C-130	The Lockheed C-130 Hercules is a four-engine turboprop military airplane designed for troop, medical evacuation,

and cargo transport. It is the main tactical airlifter for many military forces worldwide. It entered service with the United States military in the 1950s and is still being produced. It has the longest production run of any military aircraft in history. It has an empty weight of 75,800 pounds and a gross weight of 155,000 pounds. It is powered by four Allison T56-A-15 turboprops of 4,590 horsepower each. The maximum speed is 366 mph and it has a cruise speed of 336 mph. Its range is 2,050 miles and the ceiling is 33,000 feet. It has a drop capacity of 3,000 gallons when equipped with a MAFFS unit.

Lockheed C-130J

The Lockheed C-130J Super Hercules first flew in 1996 and has served the Air National Guard at Naval Base Ventura County since 2008. The Super Hercules has been used extensively by the United States Air Force and the United States Marines in Iraq and Afghanistan. It is powered by four Rolls-Royce AE2100D3 turboprop engines of 4,637 horsepower each and carries a crew of five. It has an empty weight of 75,600 pounds, a gross weight of 175,000 pounds. While the maximum speed is 417 mph, the cruise speed is 400 mph and the service ceiling is 28,000 feet. For firefighting, they can be equipped with a MAFFS unit and drop a 3,000-gallon load. The CANG 146th Airlift Wing at Point Mugu operates Lockheed C-130J aircraft.

Bell 206 L-3 Long Ranger

The Bell 206 L-3 has a crew of one with seating for six passengers. It has an empty weight of around 2,200 pounds and a gross weight of 4,150 pounds. Its cruise speed is 115 mph with a maximum speed of 145 mph. The rate of climb can be up to 1,340 feet per minute with a service ceiling of 20,000 feet. With a fuel tank capacity of 110 gallons, it has a range of 317 miles. It will hover in ground effect at 16,500 feet. The Allison 250-C30P turbine engine produces 650 horsepower but is derated to 435 horsepower for takeoff. This allows the engine to produce ample power in high altitude and/or hot weather. Since their first delivery in 1975, Bell has produced more than 1,700 Long Rangers. The popular Bell 206 series of helicopters is extremely versatile for a wide range of missions and has served fire departments around the world since the 1960s. The Long Ranger is especially adept at general service missions because of the additional interior room and added horsepower with the same economy of operation as smaller helicopters.

This permits the user to leave the more expensive-to-operate, medium-lift helicopters parked.

UH-60 Blackhawk

The UH-60 Blackhawk is a four-bladed, twin-engine, medium-lift helicopter manufactured by Sikorsky Aircraft. It is the direct military replacement for the Bell Huey medium-lift helicopter as a tactical transport. In addition to the US Army version, modified versions have been developed for the US Navy, Air Force, and Coast Guard. Blackhawks have been exported to several nations. A civilian version, the S-70 Firehawk, is in use with the Los Angeles County Fire Department. They operate three Firehawks and all are equipped with a 1,000-gallon capacity drop tank. The Blackhawk has a maximum speed of 183 mph, a cruise speed of 173 mph, a range of 736 miles, a service ceiling of 19,000 feet, and a climb rate of 1,315 feet per minute. It has a military crew of two with seating for 17 passengers. The UH-60 has a pair of 1,890-horsepower General Electric T700-GE-701C turboshaft engines. Its empty weight is around 10,600 pounds, and it has a gross weight of 23,500 pounds. It can lift an external load between 8,000 and 9,000 pounds. The Blackhawks have been in service with the US Army since 1979.