Preliminary Summary Report of Serious or Near Serious CAL FIRE Injuries, Illnesses, Accidents

GREEN SHEET

Helicopter Water Drop

August 16, 2016

Blue Cut Incident

16-CA-BDF-010468

16-CA-BDU-011631

California Southern Region

SUMMARY

On August 17, 2016, personnel assigned to a *CAL FIRE* Engine Strike Team suffered minor to severe injuries from a Type 1 Helicopter water drop while engaged in wildland firefighting operations.

CONDITIONS

Weather:	Collected from the Devore Remote Automated Weather Station (RAWS)
Temperature:	93˚ Fahrenheit
Humidity:	7%
Winds:	10 mph, Gusts 17 mph, South / Southwest
Visibility:	Skies were clear
Fuel Type:	Combination of grass, brush and over story of misc. trees
Fire Behavior:	Backing / flanking fire with some short range spotting
Topography:	Relatively flat terrain on an unimproved road

SEQUENCE OF EVENTS

The Blue Cut incident started on August 16th, 2016, at 10:42 AM.

On August 17, 2016, at approximately 4:30 PM, a Single Resource Crew Foreman acting on behalf of the Single Resource Crew Superintendent met with the Engine Strike Team Leader near Point A (see attached map) to discuss completing control line from Point A to Point B within Division A/Z.

The agreed strategy was direct attack. The tactic for the Single Resource Crew was direct hand line construction from Point A to Point B. The tactic for the Engine Strike Team was to complete a progressive hose lay from Point A to Point B.

Approximately 300 feet into the progressive hose lay, the Engine Strike Team and Single Resource Crew disengaged and returned to Point A due to an increase in fire behavior.

At approximately 5:15 PM, the Engine Strike Team reassessed the fire behavior and reengaged the progressive hose lay.

At approximately 5:30 PM, the Single Resource Crew Superintendent arrived at Point A and met with the Engine Strike Team Leader. The Single Resource Crew reengaged the handline construction.

The Division Supervisor asked the Engine Strike Team Leader to identify their resources needs. The Engine Strike Team Leader identified a need for helicopter support. The Single Resource Crew Superintendent secured helicopter support on the Air to Ground TAC directly with the helicopters working on Division A/Z. The Division Supervisor and the Engine Strike Team Leader acknowledged the Single Resource Crew Superintendent would be the ground contact to the helicopters. (Note: There were three (3) Air to Ground Frequencies assigned to the incident during this operational period.) The Engine Strike Team and Single Resource Crew were monitoring the assigned Division tactical and air to ground frequencies. It was noted by Division personnel that the Division tactical frequency was extremely overloaded with radio traffic. The extremely overloaded tactical frequency made it very difficult for Division personnel to monitor the assigned tactical frequency and monitor the assigned air to ground frequencies. The Single Resource Crew Superintendent and the personnel on the hoselay were not in communication on the Division tactical frequency at the time of the drop.

Upon completion of the hose lay at the unimproved road (Point B), the Engine Strike Team Fire Captain 1 (FC-1) notified the Engine Strike Team Leader that the hoselay was completed from Point A to Point B. The Engine Strike Team Leader acknowledged FC-1 and returned to his vehicle. Crew members from the Engine Strike Team began to mop up in the area surrounding Point B. The Single Resource Crew Superintendent and the Single Resource Crew were in the area of Point A. The Single Resource Crew Superintendent did not have a clear view of Point B (drop area).

At approximately 6:15 PM, the Type I helicopter working with the Single Resource Crew Superintendent identified they were inbound for their last drop (fuel and duty cycle limitations) and asked if the area was clear. The Single Resource Crew Superintendent acknowledged the drop instructions and identified the area was clear. The drop area was surrounded by trees, adjacent power lines, fire apparatus, and within 42 feet of a paved road. The previous two (2) drops made by the Type I helicopter were within the Division A/Z and not in support of the hose lay. The Type I helicopter made the drop as instructed in the area surrounding Point B. The Engine Strike Team crew members observed the Type I helicopter overhead releasing the load of water. Subsequently, five (5) firefighters were struck by the water drop and knocked to the ground. The Single Resource Crew Superintendent reported on Air to Ground TAC to the Type I helicopter that the drop was on target.

Immediately following the water drop, an Incident Within an Incident was declared and treatment and transportation were initiated.

INJURIES/DAMAGES

One (1) Firefighter suffered a spinal compression fracture in the thoracic region, and various scrapes and contusions, resulting in a lost time injury.

One (1) Fire Captain, one (1) Fire Apparatus Engineer, and three (3) Firefighters suffered various scrapes, contusions and discomfort. All were evaluated by an emergency room physician and returned to full duty.

SAFETY ISSUES FOR REVIEW

10 Standard Firefighting Orders:

- Maintain constant communication with your crew, supervisor and adjoining forces.

18 Watch Out Situations:

- Instruction and assignments are unclear.

(L.C.E.S.) Communication:

- More than one (1) Air to Ground frequency assigned.
- Ground tactical frequency defined as overloaded. Lack of radio discipline by Division personnel.

Review CAL FIRE Policies pertaining to Airtanker Drops:
4306.17 Airtanker Retardant Drop Safety Precautions
4306.18 How to Assume the Safety Position for an Airtanker Retardant Drop
4306.18.1 Assuming the Safety Position for an Airtanker Retardant Drop

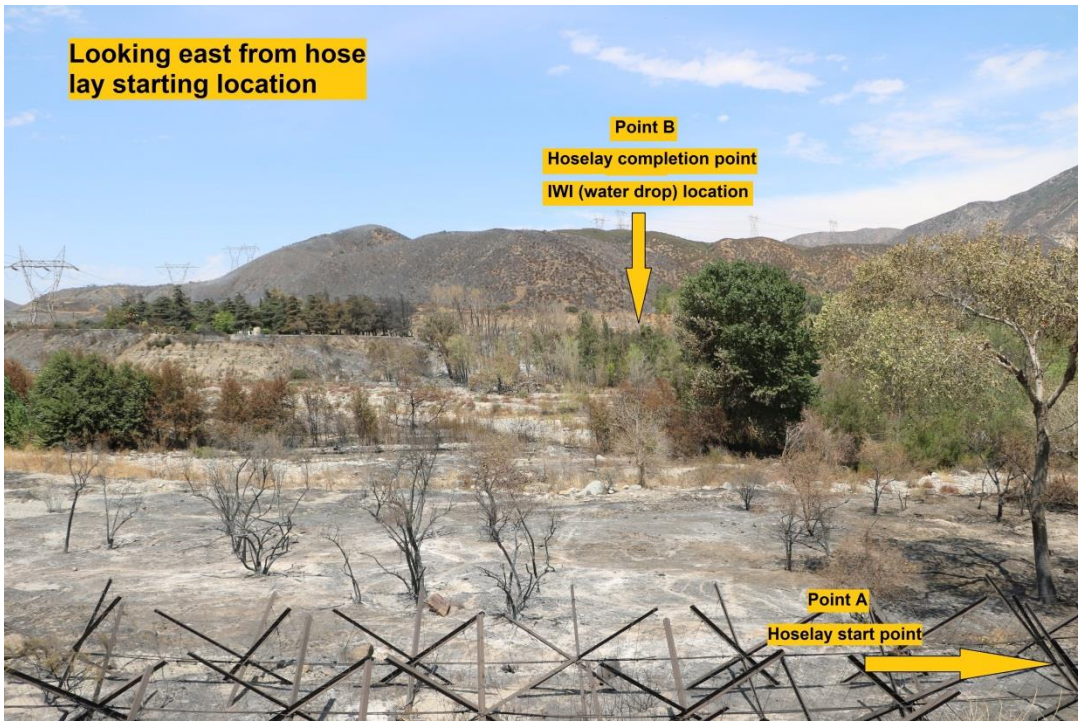
INCIDENTAL ISSUES/LESSONS LEARNED (For Near Serious Accidents)

When directing helicopter drops, the ground contact must have a clear and unobstructed view of the target area to ensure ground personnel are clear of the drop area.

When working in proximity of air resources, it is important for ground personnel to monitor designated frequencies.

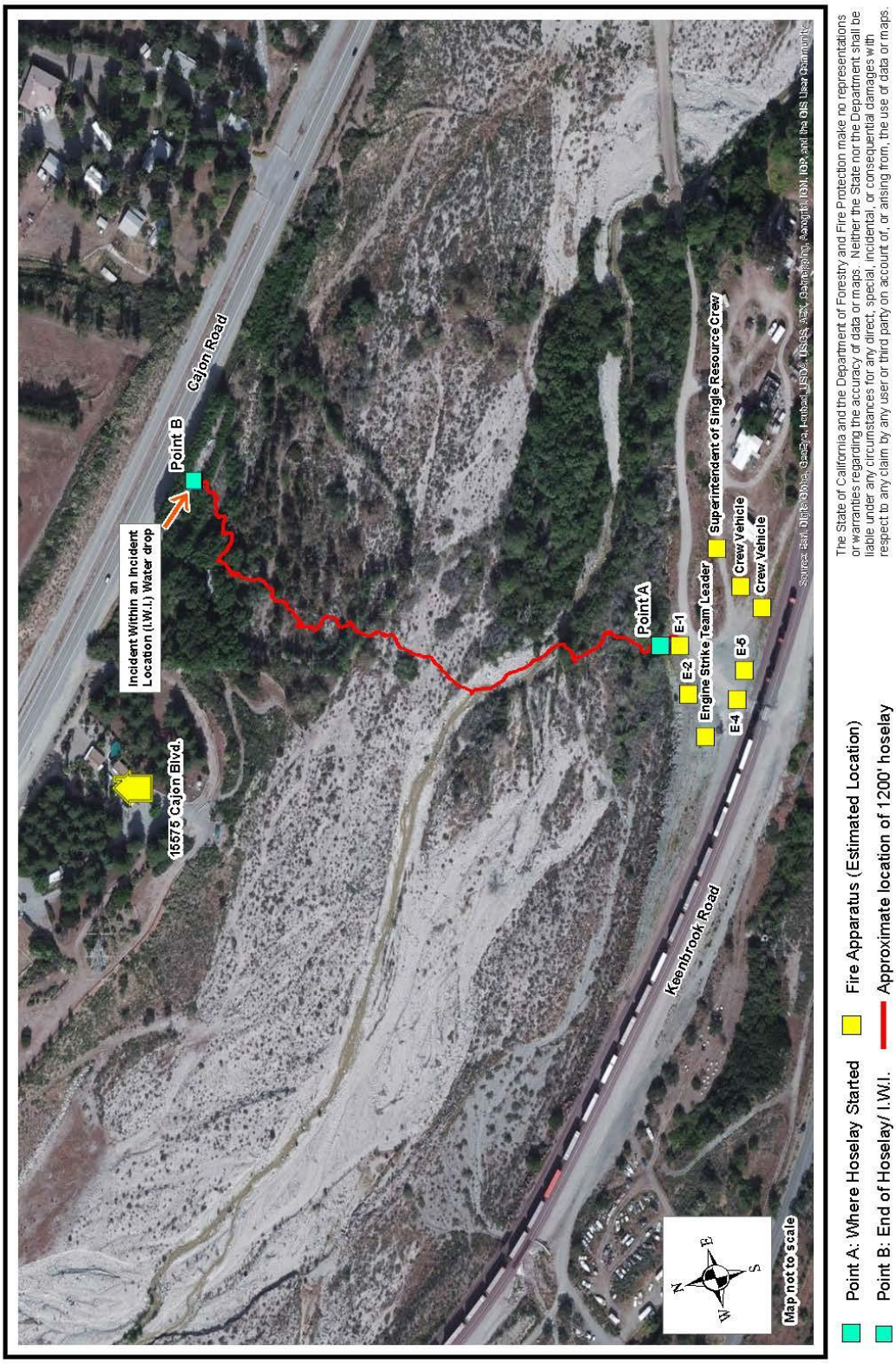
Ensure resource utilization is appropriate to the task.

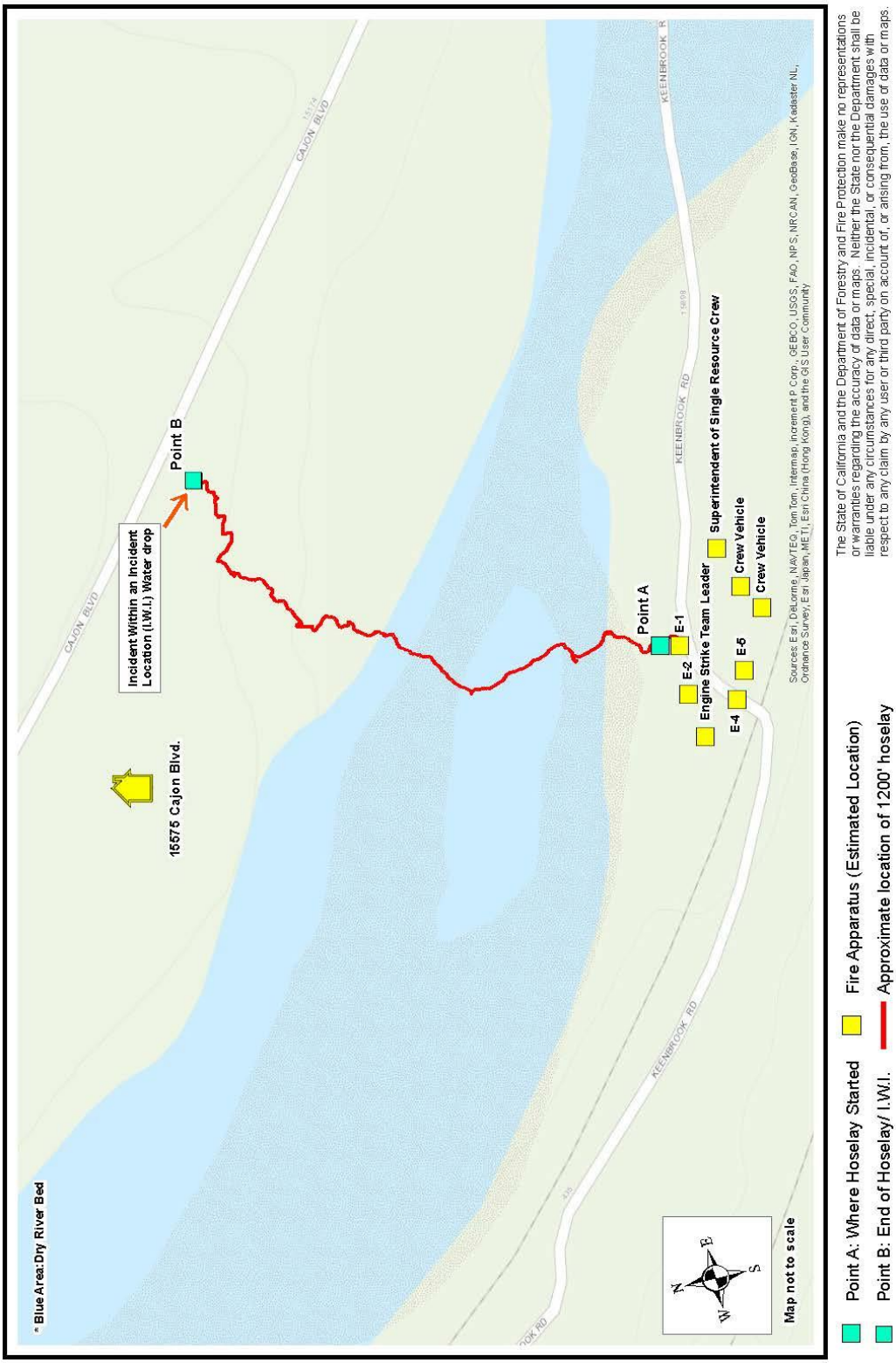
PHOTOS/SITE DIAGRAMS/MAPS




Point B
Looking South
42 feet


Point B
West of drop location


Cajon Road
Point B
Incident Within an Incident Location (I.W.I.) Water drop
15575 Cajon Blvd.
Point A
E-1
E-2
Engine Strike Team Leader
E-4
E-5
Superintendent of Single Resource Crew
Crew Vehicle
Crew Vehicle
Keenbrook Road
Map not to scale
Point A: Where Hoselay Started
Point B: End of Hoselay/ I.W.I.
Fire Apparatus (Estimated Location)
Approximate location of 1200' hoselay
The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.


Point B
Incident Within an Incident Location (I.W.I.) Water drop
15575 Cajon Blvd.
CAJON BLVD
KEENBROOK RD
Point A
E-1
E-2
E-4
E-5
Engine Strike Team Leader
Superintendent of Single Resource Crew
Crew Vehicle
Crew Vehicle
* Blue Area: Dry River Bed
Map not to scale
Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community
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Point A: Where Hoselay Started
Fire Apparatus (Estimated Location)
Point B: End of Hoselay/ I.W.I.
Approximate location of 1200' hoselay