

# **GREEN SHEET**

## **California Department of Forestry and Fire Protection**

### **Informational Summary Report of Serious CDF Injuries, Illnesses, Accidents and Near-Miss Incidents**



#### **2008 Shasta Lightning Series**

#### **Water Tender Rollover with Minor Firefighter Injuries**

**Douglas City Volunteer Fire Company**

**Water Tender 2741**

**June 22, 2008**

**CA-SHU 0004706**

#### **California Northern Region**

**A Board of Review has not approved this Summary Report. It is intended as a safety and training tool, an aid to preventing future occurrences, and to inform interested parties. Because it is published on a short time frame, the information contained herein is subject to revision as further investigation is conducted and additional information is developed.**

## **SUMMARY**

On June 22, 2008, Douglas City Water Tender 2741 was involved in a single vehicle accident during wildland fire suppression activities on the 2008 Shasta Lightning Series, north of Hayfork, California. The accident resulted in minor injuries to the driver and passenger. They were transported to the hospital, held for observation and released. The water tender was destroyed in the accident.

## **CONDITIONS**

**Fire Apparatus:** The fire apparatus involved in the accident is a two passenger water tender.

- WT 2741 is a two wheel drive 1974 Peterbilt conventional cab with a PTO driven fire pump and a 4000-gallon water tank. WT2741 was staffed with two Douglas City volunteer firefighters at the time of the accident.

**Location:** The wildland fire incident occurred in the unincorporated area of Trinity County, north of the town of Hayfork, California. This is in the State Responsibility Area protected by the California Department of Forestry and Fire Protection (CAL FIRE) Shasta Trinity Unit. The accident site was on a dirt road approximately 8 miles south of the intersection of Highway 3 and Deer Lick Springs Road. (Latitude: 40° 31' 17.46" N Longitude: 122° 56' 32.65" W). The elevation at the accident site is approximately 2510 feet above sea level (ASL).

**Topography:** Road surface was approximately 20 percent with steep banks, ranging up to 100 percent, near the accident site.

**Fuel Type:** The incident occurred in mixed fuels and timber with associated ground litter. Oak, fir and pine trees flanked both sides of the dirt road with canopy closure over the road prior to the incident.

**Weather Observations:** June 22, 2008, 1650 hours from Trinity Camp RAWS Station

**Temperature:** 80 Degrees Fahrenheit

**RH:** 10%

**Winds:** 5 MPH SW

## **SEQUENCE OF EVENTS**

On Sunday afternoon, June 22, 2008, Water Tender 2741 was dispatched to a vegetation fire approximately 10 miles east of Highway 3 on Deer Lick Springs Road. WT 2741 assignment was to support an engine hose lay by transporting loads of water from the creek in the canyon. Access to the fire was a narrow road surface with limited visibility and few opportunities to turn around. Widths of the road surface varied due to fixed rock outcroppings, dirt/rock slide damage, moisture erosion and traffic wheel ruts. Vegetation in the vicinity of the accident consisted primarily of timber, logging slash and forest litter along steep banks although in some areas there is no vegetation to hold a vehicle in place if it were to leave the road surface.

WT 2741 was traveling to the 6-40 fire, lightning caused incident that was approximately 500 acres in size at the time of the accident. The water tender was making its first water delivery, climbing up the steep access, southbound toward the fire on Deer Lick Springs Road.

At the eight mile marker, on a grade of approximately 20 percent, the water tender was traveling on a road surface that varied from 9 feet to 9 feet 8 inches in width. The operator encountered an erosion slide caused by winter runoff that reduced the road width from 9 feet to an average of 7 feet 5 inches for approximately 38 feet. The slide measured approximately 2 feet 5 inches in height and had been slightly compacted by vehicles traveling over the top of the slide in advance of the water tender.

As WT 2741 approached the erosion slide the operator steered the vehicle to the right side of the road in order to reduce the negative effects of steering over the elongated hump (38 feet long) on the left side of the road. The outside wheel width of the vehicle measures approximately eight feet. The operator encountered extremely loose soil and gravel on the downhill side of the road surface, miring the rear wheels and later, the right front steering tire of the vehicle, causing an unstable vehicle situation.

The soil on the right side of the road collapsed and the water tender began a slow roll over the embankment. As the steep bank and vegetation gave way, the vehicle overturned and initially landed upside down approximately 50 feet from the road surface on a 50-60 percent slope.

The two occupants managed to escape from the vehicle's cab and then climbed up to the road surface. The water tender was not stable in the upside down position and within minutes it rolled again from its rest another one-half turn and lodged against a small fir tree, nearly collapsing the tree from the weight of the vehicle.

Witnesses at the scene performed initial medical assessments on the victims. They were then transported to local hospitals for observation.

The road surface was later cleared by a private contractor to afford safe travel for subsequent vehicles.

## **INJURIES/DAMAGES**

### **Injuries:**

Minor abrasions; victims treated at local hospital and released.

### **Damages:**

Water Tender 2741 sustained major damage and is considered to be a total loss.

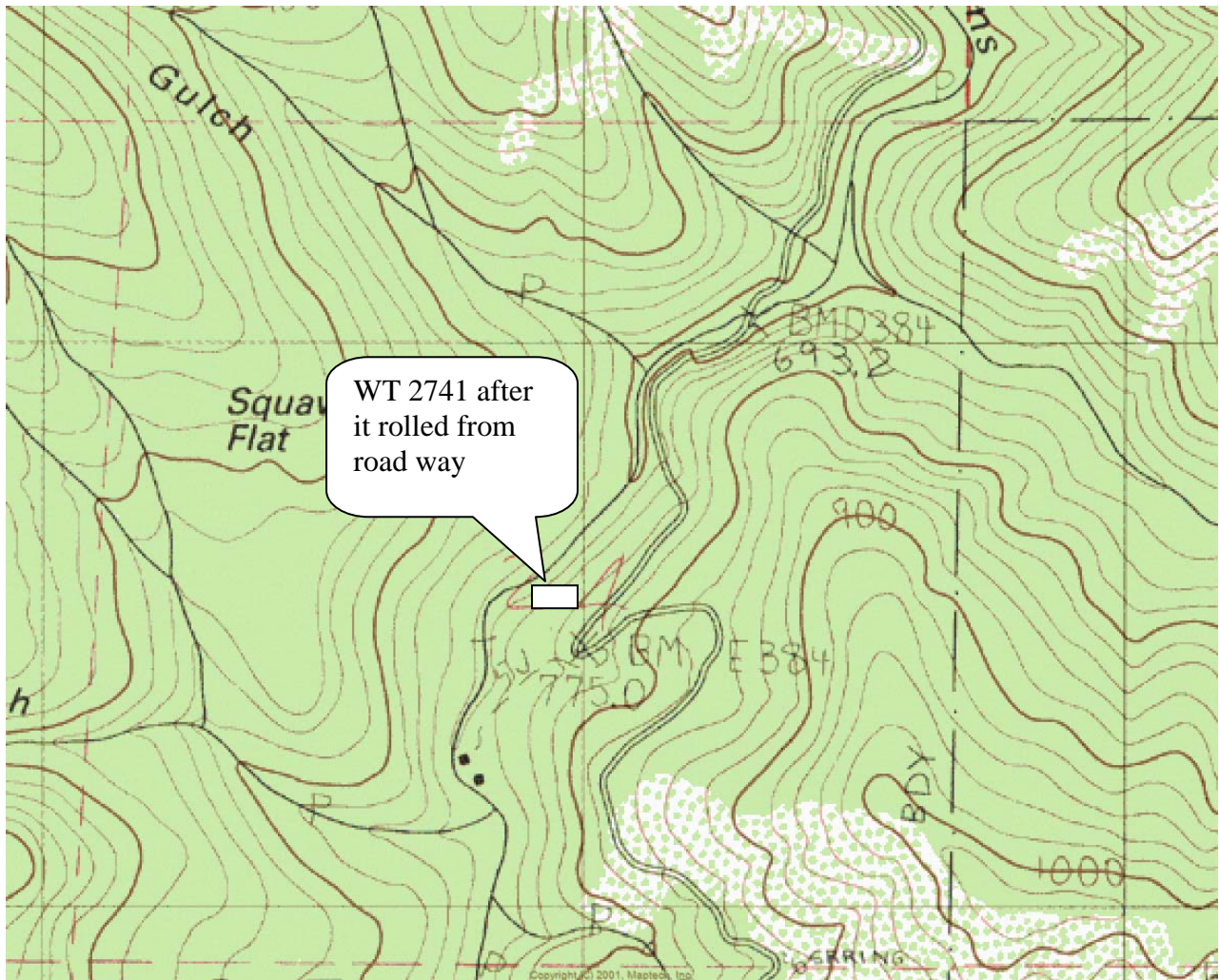
## **SAFETY ISSUES FOR REVIEW**

1. Vehicle operators must maintain situational awareness when considering or observing changing road conditions, steep slopes and variances in road compaction.
2. Operators must consider the actual width of their vehicle, obstacles and/or obstructions that can cause or force a vehicle to move out of its normal traffic path resulting in road collapses, slides, etc.
3. When operating a vehicle on narrow road surfaces and encountering a road slide or width reduction, it is advisable to get out of the vehicle and walk the area measuring your access to safely pass the obstruction or hazard.
4. If there is another occupant in your vehicle, it is advisable to have the passenger get out of the vehicle and guide you across the hazardous pathway.

## Water Tender Rollover with Minor Firefighter Injuries

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June 22, 2008



**Topography view of accident site. Road surface called Deer Lick Knob at scene. Slide occurred between switchback and accident site, reducing the width of the road surface.**

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**Satellite view courtesy of Google Earth. Accident site occurred in vicinity of older logging site, above a logging landing and skid trail.**