

**Banner Queen Prescribed Fire Escape  
California Desert District  
El Centro Resource Area  
July 1, 1998**

Synopsis of Events Leading to the Escape of the Banner Queen Prescribed Fire

The Banner Queen Prescribed Fire, an approximately 650 acre project in mature chaparral, was planned on BLM owned land within CDF's Direct Protection Area in the El Centro Resource Area. The burn was first ignited on July 1, 1998, at approximately 1235 hours. The first ignition was a test burn ignited on a ridge top on the Southeastern portion of the burn block. Shortly after ignition, two spot fires occurred. A 10 person crew, with the assistance of helicopter bucket drops were able to contain the first spot. One of the helicopters (H-538, a type II with a L.A. tank) experienced a malfunction with the tank door and had to shut down for repairs after making only one drop.

The second spot grew to about 2 acres, despite efforts to suppress it. The prescribed fire manager, FMO for the California Desert District, and CDF agency representative and escaped fire initial attack incident commander, agreed to order two air tankers to help contain this spot.

This spot fire spread into steep terrain that was inaccessible and unsafe for ground crews. When the spot fire reached four acres in size, the prescribed burn was declared an escape. This was done with the concurrence of the BLM prescribed fire manager and the CDF agency representative. The escaped fire was named the Chariot, and the CDF assumed command.

Synopsis of Review Team Mobilization and Activities

A Review Team was mobilized on 7/2/98 at the request of the Acting State Fire Management Officer. Team makeup included:

Team Leader Ken Castro, Fire Management Officer, NPS, Lassen Nation Park  
Ken Pimlott, CDF, Unit Forester, Riverside Ranger Unit  
Paul Whitcome, BLM, Alturas Area Fire Management Officer  
Doug Waggoner, BLM, State Fire Suppression Officer was assigned as liaison/advisor.

Team members gather at Southern Operations Office in Riverside, California, at approximately 1100 hours on 7/3/98. With the assistance of Department of the Interior Coordinator, the team began gathering initial information such as weather information, burn plan documentation, and dispatch cards.

In the afternoon of 7/3/98, the team traveled to Puerta La-Cruz Conservation Camp, which served as the Incident Command Post for the Chariot Incident. At the ICP, the team met with the following individuals:

CDD FMO & Banner Queen Prescribed Fire Manager  
CDF Battalion Chief & Chariot Incident Commander  
CDD Associate District Manager  
El Centro Field Office Manager  
Outdoor Recreation Planner, El Centro Field Office  
NPS/BLM Area FMO, Joshua Tree/Palm Springs Field Office

It should be recognized at this point that the Banner Queen Prescribed Fire was unique for California BLM in that a private contractor (North Tree, Prescribed Fire and Fuels Division) was utilized to provide key overhead, equipment and personnel to carry out the project. Key overhead personnel provided by the contractor included the burn boss and ignition specialist. These individuals had been released from the incident prior to the Review Team's arrival, and were not available for interviews at the ICP.

At this meeting, the planning of the Banner Queen Prescribed Burn and the chronology of events leading up to the escape were made clear to the team. In addition, tactics and the decision-making processes were elaborated on by the prescribed fire manager.

The agency administrators had an opportunity to ask questions and discuss how events transpired and what might be done in the future to improve items such as media interaction.

Following this meeting, the team took a reconnaissance flight of the prescribed burn and wildland fire area.

The following day, 7/4/98, the team met in South Operations Coordination Center to begin consolidating information into a report. In addition, team members conducted a telephone interview with North Tree, the Burn Boss of the Banner Queen Prescribed Burn.

#### Areas Examined by the Review Team

At the initial meeting of the review team, it was determined that the purpose of the investigation was to look solely at events and conditions contributing to, and leading up to the escape of the Banner Queen Prescribed Fire.

Key Items selected for review:

Weather Conditions

Fuel Conditions

Burn Plan & Prescription

Strategy and Tactics Employed in the Test Burn

Qualifications of Key Overhead in the Prescribed Burn Organization

Contracts and Agreements

Interagency Involvement and Coordination

Management of Information/Media

Key Items not selected for review:

Management of the Escaped Fire

Historical Planning & NEPA documentation for the Banner Queen Project

The review team concluded their investigation and initial report on the evening of July 4, 1998. Attached is a summary of those conclusions. During the course of investigations and interviews, several important items that were not directly related to the escape were identified. Their additional findings bear mentioning and are included in the summary and conclusions section.

**Summary Conclusions**  
of the  
Banner Queen Prescribed Fire  
Investigation Team  
(July 4, 1998)

These conclusions are the second part of the review team package that include (part one) a synopsis of the events. This package is presented to Bureau of Land Management, acting State Fire Management Officer.

**I. Findings Related to the Escape:**

- Preparation of the Banner Queen Prescribed Fire was well planned and the local unit should be recognized for the level of preparation they undertook. Of particular mention is the use of onsite RAWS and work with the Riverside IFFWU as well as live fuel moisture sampling.
- Tactics and strategies that were used for operations including the test burn, subsequent actions up to and including the declaration of an escape, and initial attack actions were appropriate and professional.
- Transition of the incident from a prescribed fire to a wildland (suppression) fire was handled well and allowed for immediate action to take place and provide for firefighter safety.
- Coordination and support with the contractor was extraordinary. Of special note the pairing of contract and agency division supervisors was done to ensure clear, concise communications and direction to holding and ignition resources. This coordination was critical during the conversion to a wildland fire.
- The interagency cooperation involved in the day to day operations of the overall fire program as well as the planning, preparation and attempted execution of the prescribed fire had a significant influence on the success of the suppression efforts after the declaration of a wildland fire.
- Key overhead positions, both Federal and Contractor, met or exceeded agency qualification requirements (NWCG 310-1, Part 2).
- The fire behavior observed during the test fire and subsequent spotting was mostly likely a product of heavier fuel loading of cured grasses burning in and around brush models with a 40-50% loading of a dead to live component.
- Not enough consideration given to the fire effects of the grass component in the predominant brush models used (with a high live to dead ratio). Repeated references to the grass loading were made by almost everyone interviewed. The

prescription developed in the approved prescribed fire plan did not reflect changes in fuel structure by the time of the prescribed fire test burn.

- Topography, not operations, was a major factor in the holding crews not being able to pick up spot #2. Slopes of over 45 degrees covered by heavy brush did not allow holding forces to approach or take action on this spot in a safe manner. The supervisor in charge of holding forces at the test fire site needs to be recognized for not compromising firefighter safety to “catch a spot” in a dangerous location.
- Malfunction of Helicopter 538 belly tank was a critical factor in the escape.

## **II. Findings Not Related to the Escape:**

- Better coordination between agencies (CDF/BLM) was needed to provide accurate and consistent information to the public/media. Addressing responsibilities for media releases within a contingency or information plan could be helpful.
- BLM (California) Manual Supplement to national prescribed fire policy (release no 9-37, 7/11/88) does not adequately reflect current nation policy and direction. This manual should be updated.
- Contingency section within the Prescribed Fire plan needed to address and identify contingency resources by type and kind in the event of an escape. (California Mobilization Guide Section 23.10 / Page 46).
- Amended Prescribed Fire Plan for the Banner Queen was not signed by the Agency Administrator. Amended plan needed to be approved by agency administrator.
- The Federal Interagency Communications Center (FICC) did not have a copy of the amended plan. FICC had earlier version of the plan (1994).
- Fire Project (F Project) has brought up some concerns that real time digital pictures, video feed has the potential to release information prior to review and approval by Incident Commanders and/or Agency Administrators. Protocols need to be developed and information managed.
- Sections in the amended Prescribed Fire Plan were left blank. Sections that do not apply should be filled in as “not applicable (n/a)” or “reference attachments”.
- The Prescribed Fire Plan should be written to maintain flexibility, including all possible treatment windows and not be overly restrictive. (Example; treatment date(s) within prescribed fire plan called for a spring burn last week of May between 110-1500 hours).

### **III. Closing Summary:**

Many of the personnel involved in the Banner Queen Prescribed Fire and subsequent Chariot Wildland Fire are highly qualified and respected with many years of experience in these fuel types. Planning was for the most part complete, operations were conducted safely, effectively and above all professionally. Preparation was more than adequate for the prescribed fire with more resources than were called for in the holding section of the plan.

During interviews and the course of the investigation none of the personnel associated with either the prescribed burn or the wildland fire expected the escape. The occurrence of the unusual amount of precipitation, brought on by this year's El Niño event has extended spring-like conditions by over a month. These conditions have produced an amount of fine fuels (grasses) that exceed those remembered within recent memory. Chamise was flowering during the time of the prescribed burn, indicating a maximum live fuel moisture content. Which is why the unit was planning to utilize a helitorch to generate enough intensities to carry the fire through the brush.

Earlier prescribed burns this spring in the area have produced poor results. Fire behavior observations on wildland fire (suppression incidents) were small for the time of year resulting in lower rates of spread, flame lengths, intensities and less difficult fire to pick up.

While it was recognized that the grasses would be a problem for control and spread later in the year, attention was focused on the brush component. Grasses with significant live to dead component in the fifty plus year old chaparral generated difficulty to control when combined with topography most likely led to the escape.

This incident and review should serve to remind managers, fire behavior personnel, and field units that fuel conditions brought about by El Niño may have significantly changed expected fire behavior.