

A black and white photograph of four firefighters in full gear, including helmets and oxygen tanks, standing in a forest. They are holding tools, and smoke is visible in the background.

North Main Divide Fuel Break Burn

REGIONAL PRESCRIBED FIRE REVIEW REPORT

A black and white photograph of a helicopter, with the registration "N359BD" visible on its side, parked on a grassy field. The background shows a forested hill.

May 2006

**Pacific Southwest Region
Cleveland National Forest**

I. OVERVIEW

NORTH MAIN DIVIDE BURN PROJECT

On June 24, 2004, the Trabuco District Ranger on the Cleveland National Forest (Forest) signed a Decision Memo (DM) for the North Main Divide (NMD) Burn Project, applying Categorical Exclusion #10 (hazardous fuels reduction activities using prescribed fire, not to exceed 4,500 acres, and mechanical methods for crushing, piling, thinning, pruning, cutting, chipping mulching, and mowing, not to exceed 1,000 acres).

The intent of the NMD Burn Project was to contribute to the accomplishment of the National Fire Plan in protecting communities, natural resources, the lives of firefighters, and the public.

The purpose of the NMD Burn Project was to maintain a system of fuel breaks consisting of lighter fuels designed to limit the spread of wildfire while maintaining a safe environment for firefighters conducting suppression operations. The project was to be implemented over a 5-year period with areas of the fuel break system being burned on a rotational basis.

The DM stated that “burning would be conducted in the cooler spring months in order to reduce the current year crop of grasses” (fine fuels). The DM also specified that heavier fuels need to be pre-treated through cutting or crushing by hand or mechanical means. Fire crews and equipment would be staged during the ignition operations to allow monitoring of the burn operations and the suppression of any fire threatening to leave the project/unit containment lines.

The NMD Burn Project appeared in the Forest’s Schedule of Proposed Actions, and a scoping letter was sent to all interested parties. Those parties who responded to the scoping letter were in favor of the project and commented on the need to provide continued maintenance of the fuel breaks.

The Trabuco District Ranger concluded that there were no extraordinary circumstances related to the NMD Burn Project decision that would result in significant individual or cumulative effects on the quality of the human or natural resources environment.

The project’s NMD Burn Plan was approved by the Forest Fire Management Officer (FMO) in May 2005, and is consistent with the

purpose and objectives found in the project's DM and resource specialist reports. The Prescribed Fire Complexity Rating for the NMD Burn Plan was determined to be moderate.

The Trabuco Ranger District (District) initiated the NMD Burn Project on Thursday, November 3, 2005, burning 10 acres. On Wednesday, January 11, 2006, the project continued with 25 acres burned, and on Thursday, January 12, an additional 15 acres were burned. On Thursday, February 2, 2006, the NMD Burn Project was re-initiated following a successful test burn, with a total of 10 acres burned that day.

During the early morning of Monday, February 6, 2006, Monte Vista Emergency Communications Center (ECC) Dispatch reported active fire at the NMD Burn Project area. Evidence at the scene suggests that this fire may have been caused by smoldering fuel (a remnant from the prescribed fire burn project) pushed by strong Santa Ana winds through containment lines. The wildfire, later called the Sierra Fire, burned approximately 10,584 acres, of which 1,968 acres were National Forest System lands and 8,616 acres were private land. The Sierra Fire was declared 100% contained on Sunday, February 12, 2006, with suppression costs totaling about \$7,000,000.00.

SEASONAL WEATHER

The NMD Burn Project area experienced significant drought leading up to the day of the burn on Thursday, February 2, 2006, with less than a third of the normal precipitation for that time of year. Live fuel moisture readings taken on the District prior to the NMD Burn Project burn were: new growth at 72 percent and old growth chamise at 63 percent.

GENERAL WEATHER

The daily weather forecast leading up to the ignition of the NMD Burn Project was generally favorable with relatively low temperatures and high relative humidity. High temperatures were in the mid-60s with the low relative humidity in the mid-20s. Winds generally were out of the southwest at 15 miles per hour (mph) or less.

The general weather forecasts, starting at 2:30 p.m. on Thursday, February 2, 2006, from the Riverside Fire Weather Office - Predictive Services Unit (Riverside PSU) and utilized for the NMD Burn Project's mop-

up phase, called for “strong northeast to east winds with very low relative humidity over Southern California for Sunday, February 5, 2006, through the middle of next week.”

The 2:00 p.m. fire weather forecast on Friday, February 3, 2006, from the San Diego National Weather Service included a “fire weather watch . . . for the mountains and inland valleys next week.” The subsequent weather forecasts called for a fire weather watch for the project area at intermittent times, which included Sunday, February 5, and Monday, February 6, 2006.

SPECIFIC WEATHER

The daily spot weather forecast for the NMD Burn Project area was received from the Riverside PSU for Thursday, February 2, 2006, and predicted favorable conditions for the time of ignition that day through Saturday, February 4, 2006. The extended “outlook” called for conditions to change on Sunday, February 5, and Monday, February 6, 2006 -- indicating northeast to east winds ranging from 10 to 20 mph, with higher wind gusts.

Actual weather observations recorded at the Fremont Canyon Remote Automated Weather Station showed that the off-shore winds and low relative humidity occurred consistently after midnight on Sunday, February 5, 2006. Steady northeast winds began around 2:30 a.m. and the relative humidity dropped from 32 percent to 22 percent during the same time period. From that point on, wind speeds increased into the 40 mph range and relative humidity fell below 20 percent. These wind speeds and relative humidity percentages remained in this range at the time the Sierra Fire was reported. The winds continued to increase and relative humidity decreased into the teen percentages throughout the day on Sunday, February 5, 2006.

II. CHRONOLOGY OF EVENTS

Thursday, February 2, 2006:

- At 7:00 a.m., fire personnel traveled from duty stations to the NMD Burn Project. On-route, the District FMO and Forest Service (FS) Fire Engine E-24 checked on another District prescribed burn project called the Falls Burn Project.

- At 9:00 a.m., the initial on-site weather was taken.
- At 9:30 a.m., the Burn Boss began the ignition phase of the NMD Burn Project which included briefings with the burning crews, holding crews, and other personnel concerning safety, prescribed fire operations, weather and assignments.
- The “Go-No-Go” checklist was completed.
- From 10:00 to 10:20 a.m., a test burn, which met resource objectives within the NMD Burn Plan, was successfully conducted.
- At 10:20 a.m., the Burn Boss made the decision to continue the NMD Burn Project burn operation.
- At 1:30 p.m., the Burn Boss met with the Burn Boss trainee and BC-21 to discuss the progress of the NMD Burn Project. They determined that the continuation of the burn would not achieve the resource objectives of the NMD Burn Plan.
- At 2:07 p.m., the Burn Boss ceased burning, released the California Department of Forestry and Fire Protection (CDF) hand crews, and directed the remaining burn organization to begin the mop-up and patrol phase for the burned area with the exception of the “bowl area”- which is approximately one acre.
- At 3:00 p.m., the Burn Boss assigned FS Fire Engine E-20 and the fuels crew to mop-up and patrol the NMD Burn Project on Friday, February 3, 2006.
- At 4:18 p.m., CDF Fire Engine E-3174 was released from the NMD Burn Project.
- At 4:25 p.m., all resources (with the exception of E-20) were released from the NMD Burn Project and returned to the station.
- At 7:30 p.m., E-20 returned to the station and notified the Monte Vista ECC Dispatch that there were “no smokes showing.”
- Weather observations were taken at 9:00 a.m., 9:45 a.m., 10:30 a.m., 11:45 a.m., and 12:45 p.m.

Friday, February 3, 2006:

- At 7:00 a.m., the fuels crew and E-20 went into service. Their assignment was to mop-up all residual smokes and to patrol the NMD Burn Project.
- At 7:30 a.m., the FS Fire Duty Officer briefed the fuels crew and E-20 at the Corona Station on their assignments, weather, and safety for the day. After the briefing, they departed to the NMD Burn Project.
- At 9:48 a.m., the fuels crew and E-20 arrived at the NMD Burn Project.
- At 3:07 p.m., E-20 and the fuels crew left the NMD Burn Project.
- At 4:00 p.m., E-20 and the fuels crew arrived at the Corona Station. The District's Fire Captain called the fuels crew to inquire on the status of the NMD Burn Project. The fuels crew reported that all residual smokes were extinguished.
- At 5:30 p.m., E-20 and the fuels crew went off duty.

Saturday, February 4, 2006:

- At 8:00 a.m., E-24 returned to the other prescribed burn on the District, the Falls Burn Project.

Sunday, February 5, 2006:

- At 10:30 a.m., FS Patrol PT-21 departed for the NMD Burn Project to patrol the project area from the road.
- At 11:00 a.m., PT-21 and another firefighter arrived at the NMD Burn Project. They reported no smokes.
- At 11:20 a.m., PT-21 and the other firefighter returned to the Corona Station.
- At 4:30 p.m., all fire personnel were declared off-duty.

Monday, February 6, 2006:

- At 4:35 a.m., the Monte Vista ECC Dispatch notified BC-21 of fire being reported at the NMD Burn Project.
- At 5:00 a.m., District Fire Captain 27 arrived at the NMD Burn Project.
- At 6:03 a.m., BC-21 notified the Monte Vista ECC Dispatch of “fire outside of prescription.”

III. FINDINGS

The following section documents the region’s findings of factual events leading up to and possibly causing the apparent escaped NMD Burn Project. It is not intended to be an investigation of Forest personnel or the subsequent wildfire.

1. The DM for the NMD Burn Project was signed on June 24, 2004, by the Trabuco District Ranger and is in compliance with all established laws, regulations, and policies.
2. There were no significant changes in vegetative conditions, social issues, or Forest priorities resulting in effects other than those described in the DM.
3. The NMD Burn Plan was approved in May 2005, and is consistent with the goals and objectives found in the DM and resource specialist reports.
4. The NMD Burn Plan was created utilizing the appropriate regional format.
5. The project activities and actions identified in the DM were utilized in the development of the NMD Burn Plan objectives and prescription.
6. The NMD Burn Project was an on-going operation with portions of the fuel break burned during the fall and winter months beginning in November 2005. The DM states that the project should be burned during the cooler spring months. The season/time of year in the NMD Burn Plan prescription calls for spring burning.
7. All fire personnel that planned and implemented the NMD Burn Project met all required fire qualifications.

8. The project was rated at a moderate complexity in the NMD Burn Plan.
9. The Technical Reviewer for the NMD Burn Plan was not a qualified Type I Burn Boss. Regional policy states that a Type I Burn Boss will conduct technical reviews of prescribed fire burn plans that are a moderate complexity level.
10. The Forest FMO, as the Acting Forest Supervisor, signed and approved the NMD Burn Plan. Regional policy states that the Forest Supervisor, or a District Ranger to whom the authority has been individually re-delegated by the Forest Supervisor, will approve prescribed fire burn plans that are rated at a moderate complexity level.
11. The NMD Burn Project's prescribed fire complexity rating was incorporated directly into the NMD Burn Plan. The National Wildfire Coordinating Group's Prescribed Fire Complexity Rating System Guide states that prescribed fire project complexity ratings will be reviewed and approved by the agency administrator.
12. No residual Mop-up Plan was included in the NMD Burn Plan. The Smoke Management and Air Quality Section of the NMD Burn Plan states that a residual Mop-up Plan will be incorporated into the NMD Burn Plan prescription with the objective of stopping all visible smokes within 48 hours of the completion of the burning phase.
13. On Thursday, February 2, 2006, the NMD Burn Project was ignited following a successful test burn, with a total of 10 acres burned that day.
14. At the time of the test burn and continued ignition of the NMD Burn Project on February 2, the extended weather forecasts were favorable with the predicted outlook indicating "northeast to east 10 to 20 mph winds with higher wind gusts" on Sunday, February 5, and Monday, February 6, 2006. The general weather forecast predicted stronger winds for Sunday, February 5, 2006, and into the middle of the following week.
15. The on-site weather readings for relative humidity that were conducted from 9:00 a.m. to 12:45 p.m. on the day of ignition, February 2, ranged from 61 to 65 percent. The relative humidity range in the NMD Burn Plan calls for "15-40%."

16. On Friday, February 3, 2006, FS Fire Engine E-20 and a six-person fuels crew were assigned to mop-up and patrol the NMD Burn Project.

17. No mop-up of the NMD Burn Project occurred on Saturday, February 4, or Sunday, February 5, 2006.

18. There was no patrol of the NMD Burn Project on Saturday, February 4, 2006; however, E-20 remained at the Corona Station available for initial attack or to support mop-up at the NMD Burn Project if smokes were discovered. The Holding Procedures Section of the NMD Burn Plan states that once a burn is in a patrol status, the burned area will be patrolled on a daily basis until the burn is declared out.

19. A patrol along the road, which was the upper control line of the NMD Burn Project, was conducted on Sunday, February 5, 2006, by FS Patrol PT-21 and another FS firefighter -- they reported no smokes.

20. Neither the District nor the Forest designated a Prescribed Fire Manager during the time period of February 2 through February 6, 2006, when the District was managing two prescribed fire burn projects. Regional policy states that a Prescribed Fire Manager will be responsible for overall management of the burn program when Forests have multiple active burns.

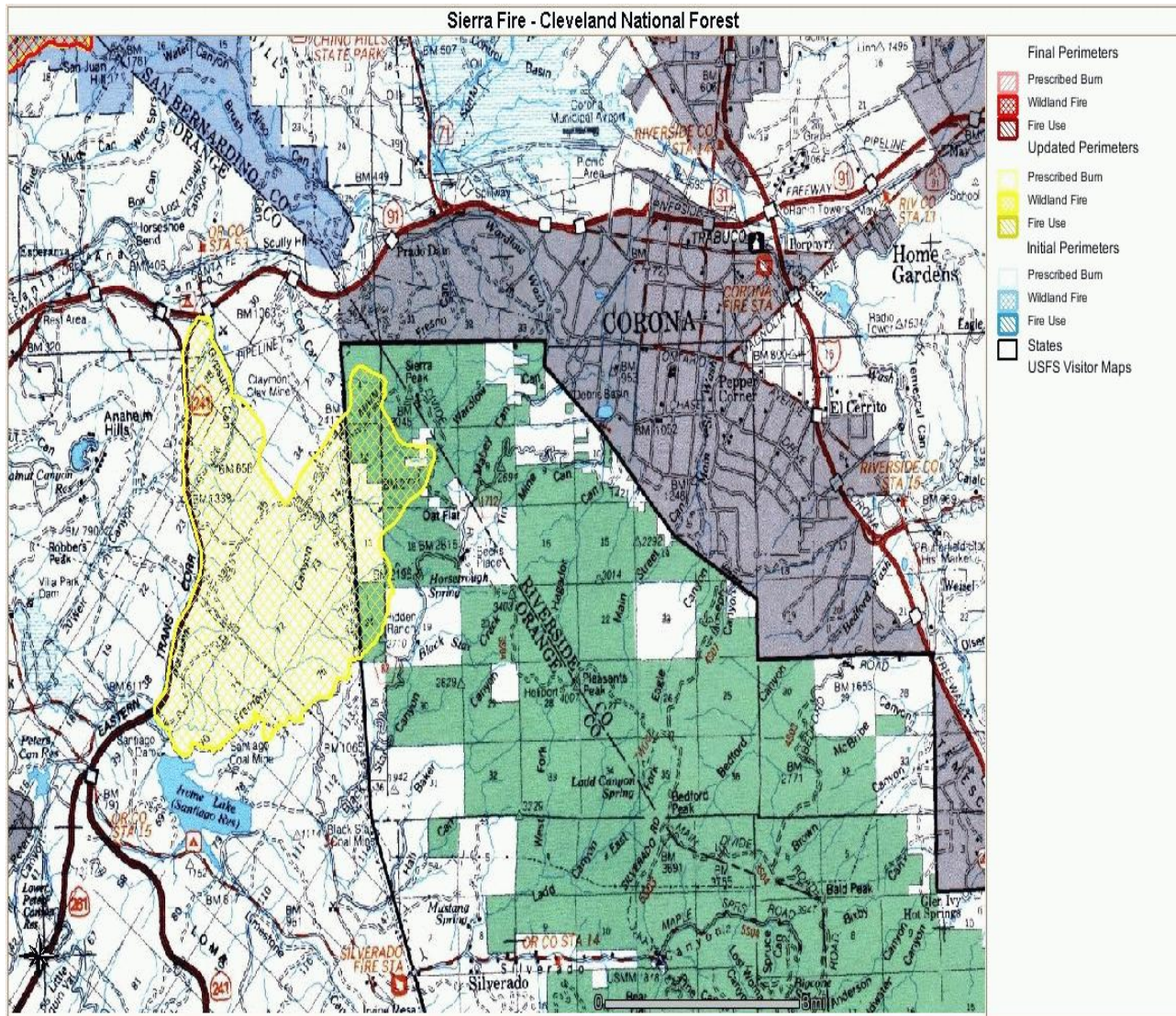
21. The Forest notified the Regional Office within the required 24 hours after the prescribed fire project had been declared a wildfire.

IV. FOLLOW-UP ACTIONS

The Forest will draft an action plan that will include a schedule of items that need to be addressed to minimize future resource damage and future prescribed fire escapes. The Regional Forester will review and finalize the action plan, and will incorporate the lessons learned into training courses that will strengthen the Region's Prescribed Fire Program.

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SIERRA FIRE – CLEVELAND NF



ORANGE COUNTY FIRE AUTHORITY
SIERRA FIRE MAP
As of 8:00 AM, Friday, February 10, 2006

