



STATION FIRE 2009

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A Photo Journal

Mt. Wilson, Acton, and Eastern Flank Fire Areas

August and September 2009

Edited by Mark Hayden, N7YLA

Narration – Carolyn Hayden, KG6RFJ

Dedication:

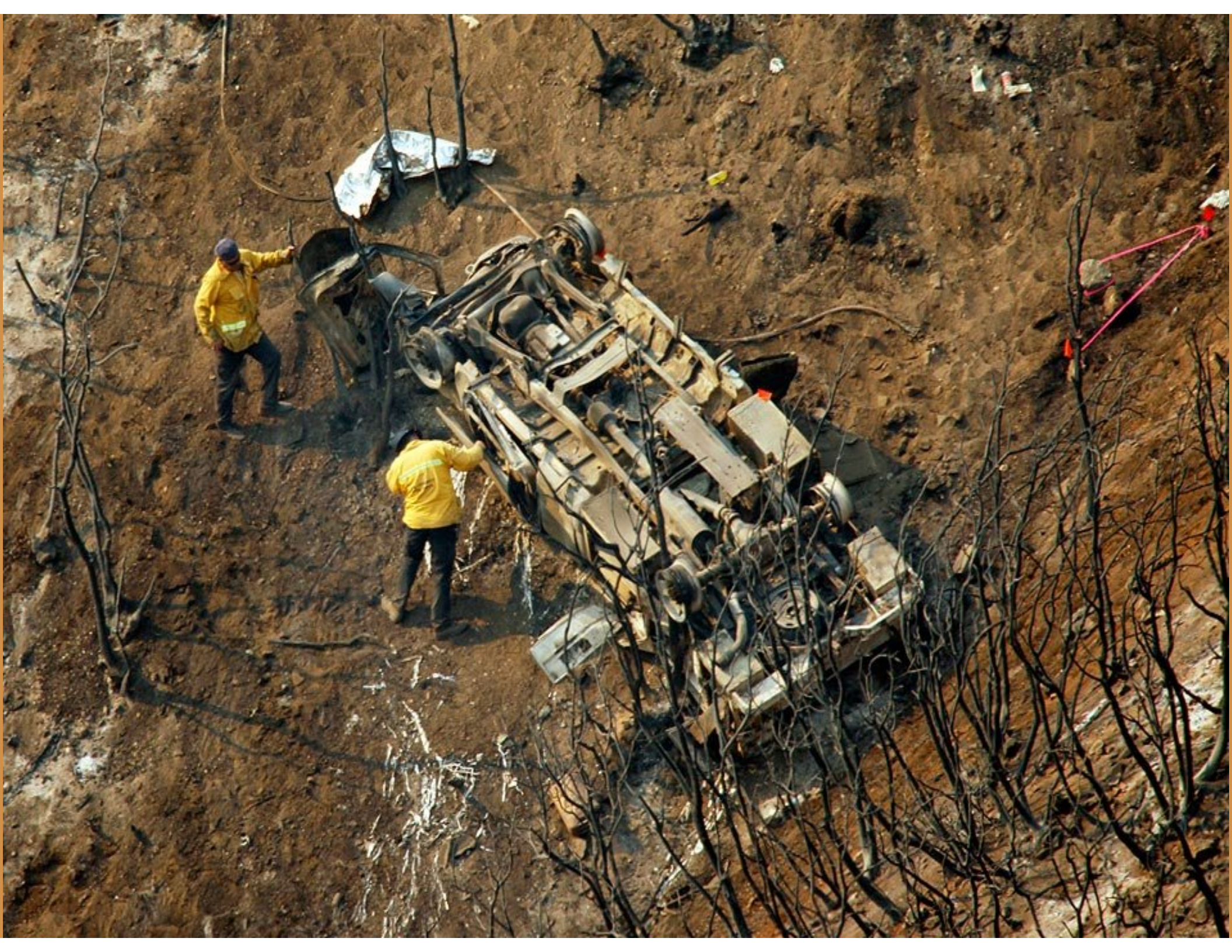
This presentation is dedicated to the thousands of firefighters who valiantly waged the battle which became known as the Station Fire in August and September 2009. Through their efforts, literally thousands of homes were spared and countless lives protected.



TED HALL



ARNIE QUINONES



The Angeles National Forest Background Information



The Angeles National Forest Fire Potential



BIOMES OF THE ANGELES NATIONAL FOREST



CHAPARRAL

A Coniferous Forest Biome in the Angeles National Forest



Introduction to Wildland Fires





ANGELES NATIONAL FOREST ON FIRE AUGUST & SEPTEMBER 2009



WHAT FUELS WILDLAND FIRES?

FUEL

Something
that will
burn



AIR

Oxygen

HEAT

Enough to make the fuel
ignite and burn

The Fire Triangle



Ceanothus



**Scrub Oak, Flammability
– Moderate to high.**



Manzanita



Chamise





BIG CONE DOUGLAS FIR OF THE ANF

Range

Bigcone Douglas-fir grows in a Mediterranean climate, characterized by hot dry summers and wet, mild winters.

Ecology

Bigcone Douglas-fir has several design features to **tolerate and survive wildfire**, notably the very thick bark, and the presence of numerous adventitious buds on the upper side of the branches; this enables the trees to survive **even crown fires which burn off all the branchlets**, the apparently dead trees becoming green again the following spring. Wildfire frequencies in the chaparral habitats in which Bigcone Douglas-fir often grows typically range from 15-50 year intervals.

Comparison of a Big Cone Douglas Fir (l) to a Coast Douglas Fir (r).



Flammability of Wildland Plants

Dead fuel moisture responds solely to ambient environmental conditions and is critical in determining fire potential.



Ceanothus, Flammability moderate



Bigberry Manzanita, Flammability moderate



Black Sage, Purple Sage, Flammability High



Buckwheat, Flammability moderate to high



California Bay, Flammability moderate



California Juniper,
Flammability high



Chamise (greasewood),
Flammability high



Coyote Bush,
Flammability low to
moderate



Coffeeberry, Flammability
low to moderate



Creosote Bush,
Flammability low to moderate



Deerweed, Flammability
moderate



Cupleaf Ceanothus,
Flammability low to moderate



Flannel Bush, Flammability
low to moderate



Great Basin Sagebrush,
Flammability Moderate



Greenbark Ceanothus,
Flammability – Low to moderate depending on available fuel moisture.



Hoaryleaf Ceanothus,
Flammability – Moderate.



Laurel Sumac, Flammability
– Moderate to high.



Lemonade Berry,
Flammability – Low to moderate



Mountain Mahogany,
Flammability – Medium.



Rabbit Brush, Flammability – Moderate.



Red Shank, Flammability – High.



Redberry, Flammability
Low to moderate



Scrub Oak, Flammability – Moderate to high.





Sugarbush, Flammability
– Low to moderate.



Toyon Berry, Flammability – Low to Moderate.



White Sage, Flammability
Low to moderate depending on available fuel moisture.



Yerba Santa, Flammability - Medium



“Falling Snags”

The Wildland Firefighter : “First In, Last Out”



The Hotshot

Smoke and ash blows in your eyes making it nearly impossible to see. Hot ash singes your neck like a swarm of mad Yellow jackets fighting over a piece of meat. The heat has such intensity that it takes your breath away. Strong winds constantly try to push you off a steep ridgeline. You're hungry, exhausted, dirty, and sweaty. You've just put in a 16 hour day hiking over miles of uneven ground, loose debris, rocks and holes. You travel to the most dangerous places where the inhabitants are wilderness animals. You are a Hotshot.







Every tool has a special niche that blends with the others to create a line in the dirt that stops fire from crossing.



Wildland firefighting requires strength and stamina and the ability to stay calm and aware when working in an extreme environment.



Tim Taddler, AP

Hot Shot Firefighter starts a back burn to mitigate the encroaching fire on the right.

Wildland Fire Fighter's Gear



Heat stress

Preventing and responding to heat stress is a vital part of a wildfire fighter's training. Here are some key aspects of that training:

- ▶ The key to keeping cool is to stay hydrated – before, during and after work.
- ▶ Out-of-state firefighters should be acclimated to Arizona before being put on the line.
- ▶ The firefighters rely on protective clothing designed to let heat out and not keep it trapped near the body.
- ▶ They use wraps around the neck and head that can trap moisture over a long period of time.
- ▶ The firefighters must pace themselves and be aware of conditions such as temperature, humidity and air movement. They take frequent breaks.
- ▶ Wildfire fighters use a buddy system so if one is experiencing a heat disorder the other can start treatment immediately.

SOURCE: U.S. Forest Service

Wildfire fighting

A look at the clothing and gear wildfire fighters carry.

Shirt Made from a fire resistant material called Nomex.

Personal gear bag

Fire shelter A tentlike item that can be used to protect a firefighter.

Water

Pants Made from a fire-resistant material called Nomex.

Leather boots

Helmet

Goggles

Tools

Wildfire fighters carry tool designed specially for fighting fires.

Gloves

Pulaski: A multipurpose ax type tool.



McLeod: A multipurpose rake type tool.



TRIBUNE

CDF GEAR





Laguna Hotshots



Setting a backfire

Each Hotshot crew and each crew member has a different personality but they all have the same goal, putting out wildland fires.

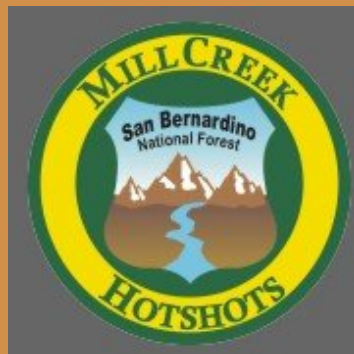




Logos of Hotshot Crews who worked on the Station Fire



California



California



Arizona



Oregon



Idaho



South Dakota

Not pictured:
Chena - Alaska
Craig - Colorado
Ruby Mtn.- Nevada
Vandenburg- Calif.

Station Fire Dynamics





The Cause: **ARSON**

ARSON HOTLINE

1-800-468-4408

After a forensic examination of the point of origin of the Station Fire, arson investigations from the Los Angeles County Sheriff's Department arson/explosives detail, United States Forest Service and Los Angeles County Fire Department concluded the Station Fire was the result of an act of arson.

Fires threaten LA



Wildland Fires spread in Southern California in late August and early September, 2009.

Wildfire expected to burn for weeks

● Fire in past 24 hours ● Fire in past 48 hours ● Fire in last 7 days



Mount Gleason
Two firefighters were killed Sunday.

The Southern California wildfire has claimed at least 53 homes and threatens thousands more. The fire is only 5 percent contained and about 2,000 people were forced out of their homes. It is expected to be fully surrounded by Sept. 15.

Flames burned 50-year-old tinder-dry brush 15 miles north of Los Angeles.

Mount Wilson
Fire crews set backfires and sprayed fire retardant.



A 1,000-acre fire threatened 2,000 homes and forced evacuations.

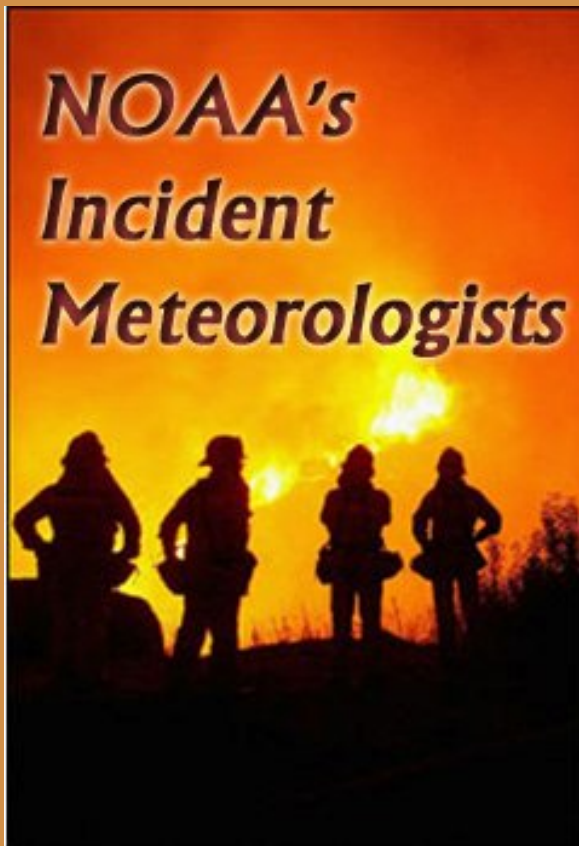
Map shows latest events and size of the Angeles National Forest fire and shows distance of fire growth over the first two days.

FIRE WEATHER !

**URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE LOS
ANGELES/OXNARD CA
955 AM PDT MON AUG 31 2009**



NOAA'S INCIDENT METEOROLOGISTS PROVIDE ACCURATE AND TIMELY WEATHER INFORMATION FOR EMERGENCY EVENTS



Remote Automated Weather Station

Satellite Image of Wildland Fires in Southern California, August – September 2009







Mushrooming clouds rise to sky as the Station Fire gradually marches west towards the communities of Acton Agua, Dulce, and Sunland Tujunga on August 31, 2009 in Los Angeles, California.



**Smoke rises from the fire in a haze seen from a passenger jet
arriving from San Francisco**



The last image sent by the Mount Wilson Webcam before it went off the air on 9/1/09



Mount Wilson Threatened



Mount Wilson - the group shot

“We expect the fire to hit the Mt. Wilson facilities between 5 p.m. today and 2 a.m. Wednesday morning,” said Los Angeles County Fire Department Deputy Chief James Powers.”



Firefighters were frantically trying to save the historic astronomical observatory and dozens of critical TV and radio antennas from destruction.







Firefighters fill up a truck with the Mt. Wilson Observatory behind them, during a day of setting back-burns to remove loose brush.



Firefighters set many backfires to halt the advancing fire fronts







A helicopter drops fire retardant on a flare up of flames in the Angeles National Forest at Mt. Wilson, Calif., Wednesday, Sept. 2, 2009.



Broadcast Communication Towers on Mt. Wilson becoming shrouded in smoke.

Tower Cam photo showing heavy smoke on Mt. Wilson

(c) UCLA Department of
Physics and Astronomy
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Flames from the Station fire approach Mt. Wilson Observatory in the Angeles National Forest.



A Martin Mars Super Scooper flies over one of the telescopes atop Mt. Wilson, moments before dropping 7,200 gallons of water to keep flames away from the Mt. Wilson Observatory and radio towers Tuesday.







The *Super Scooper* attacks the Station Fire at Mt. Wilson.



The Martin Mars at Lake Elsinore





Members of the Mule Creek State Prison Fire Department work on a back burn beneath equipment supporting the Mt. Wilson Observatory telescopes as the Station fire moves closer Tuesday. In the background are radio and TV antennae.



MOP UP



HOT SPOTS REMAIN

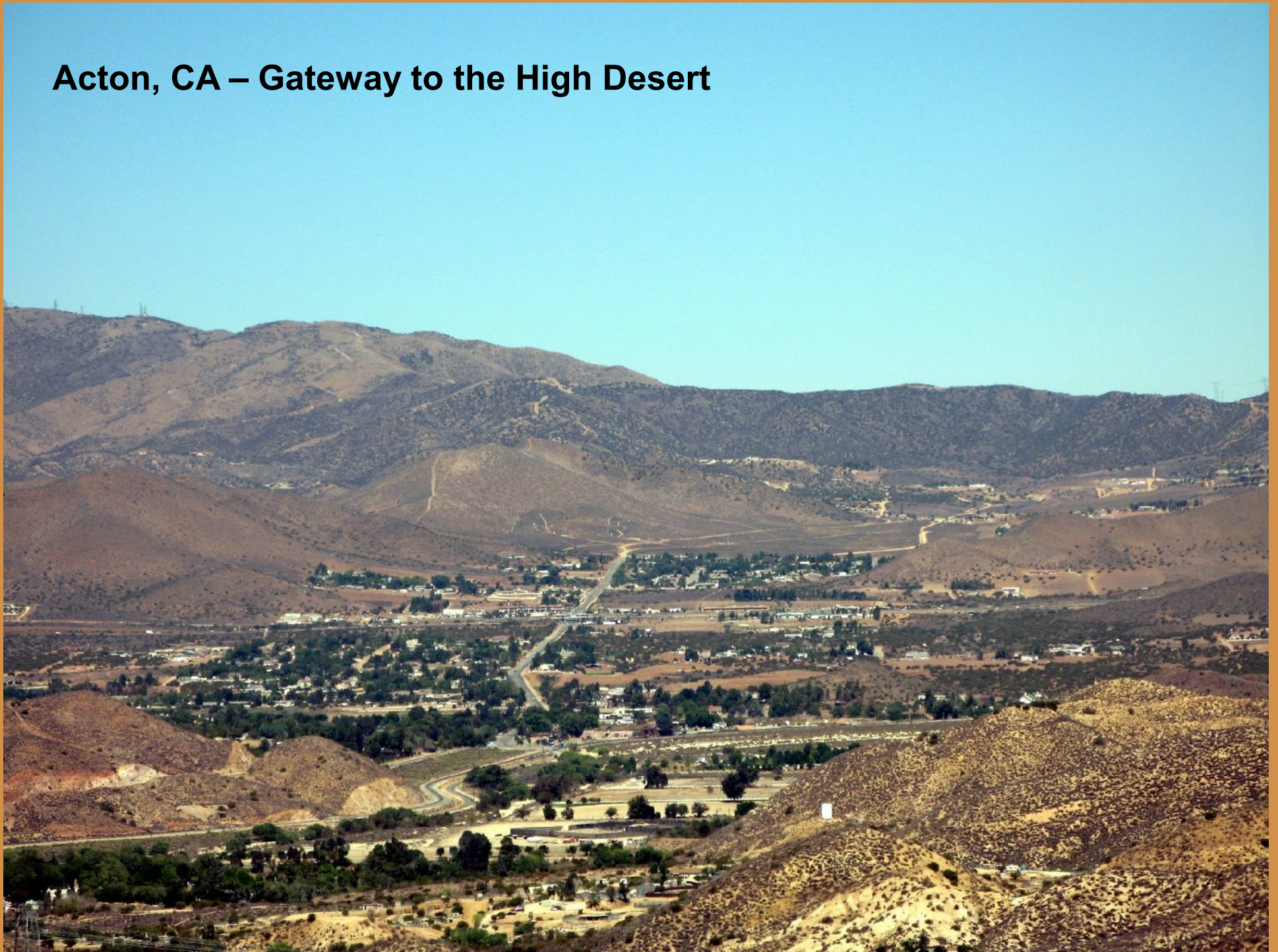


A roadside cross sits in the charred Angeles National Forest as the sun breaks through wildfire smoke at Mt. Wilson.

***Los Angeles County Fire Department
Battalion Chief Steve Martin said, "We
are going to burn, cut, foam and gel.
And if that doesn't work, we're going to
pray. This place is worth a lot, but it's
not worth dying for. "***

***The Station Fire
invades the
Acton, CA area***

Acton, CA – Gateway to the High Desert





Thousand Trails campground on Crown Valley Road near Acton where our trailer is stored.



Acton, August 30 and 31, 2009



ALISO CANYON ROAD NEAR ACTON ON AUGUST 30.



A Los Angeles County fire fighter sprays water on hot spots as he fights the Station Fire in Acton, California.

A DC-10 converted to an air tanker drops fire retardant as the Station fire burns in the hills above Acton







This horse may be in harm's way near Acton.

**Metrolink train in Soledad Canyon with fires raging
in the background.**





Station Fire approaches Acton area on August 30

FIRE BUCKET



California Highway Patrol Officer David Lee closes Soledad Canyon Road and Bootlegger Canyon Road in Acton.



Camp crews and firemen mobilize on Aliso Canyon Road in Acton Monday afternoon. The Station Fire creaped near some homes along the road Sunday night, at times jumping the road.





Their mission: Seek and Destroy Hotspots

Members of the Scorpion 5 fire camp crew from Porterville, CA







If you have
worked on a
handcrew,
you know
what hard
work is!

**These firefighters are using their
Pulaskis to clear brush that has
ignited.**

A photograph showing firefighters silhouetted against a bright, hazy sun. The scene is filled with smoke and the silhouettes of bare trees, suggesting a wildfire. The text "It's HOT!" is overlaid in white at the bottom left.

It's HOT!



Flames engulf a power transmission tower at the Station Fire in the Acton, California area north of Los Angeles August 30, 2009.



An inmate firefighter hand crew clear brush as the Station fire burns in the hills above a home in Acton, Calif. on Sunday, Aug. 30, 2009.



Smoke from the Station fire billows as the moon glows over Soledad Canyon Road in Acton.

DOZER WORK




Using bulldozers to clear fire breaks goes on day and night



High gain antennas were essential for ground to ground and ground to air radio communications during the Station Fire..



The Fire did not reach the Thousand Trails camp ground on the north-western flank of the Station Fire (blue line).



**Fire came within $\frac{1}{4}$
mile of our
campground.**

09/07/2009 10:45

Lucky RV's !



09/07/2009 10:45



**This home barely
escaped destruction.**

09/07/2009 10:45

View from the Blum Ranch into the Mount Gleason area
where two firefighters lost their lives.



09/07/2009 11:25



Aliso Canyon Road near Acton looking into Gleason Canyon. The Station Fire ravaged the area.





Firefighters look for hot spots on a burnt landscape in the Acton area, “keeping one foot in the black”

Los Angeles County firefighter puts out hot spots during the Station fire in the Acton area of Los Angeles, California August 30, 2009.



A deer walks through charred forest on Mount Gleason in the Angeles National Forest near Acton, California.



Burnt homes are left in ruins in the Acton area in California August 31, 2009. As of Monday evening, a total of 6,300 homes throughout the fire zone were under evacuation orders, authorities said.





A home owner returns for the first time to find his home in ruins after a wildfire in the Acton area in California August 31, 2009. As of Monday evening, a total of 6,300 homes throughout the fire zone were under evacuation orders, authorities said.



View from a burned out truck across acres of scorched hillsides in Acton as smoke rises from Mt. Gleason in the distance Monday.

Rims and other remnants are all that remain in this land near Soledad Canyon Road and Bootlegger Canyon Road Monday afternoon after the Station Fire burned through the Acton area Sunday night.







This horse was being evacuated from Acton. It hadn't been trained to ride in a trailer.

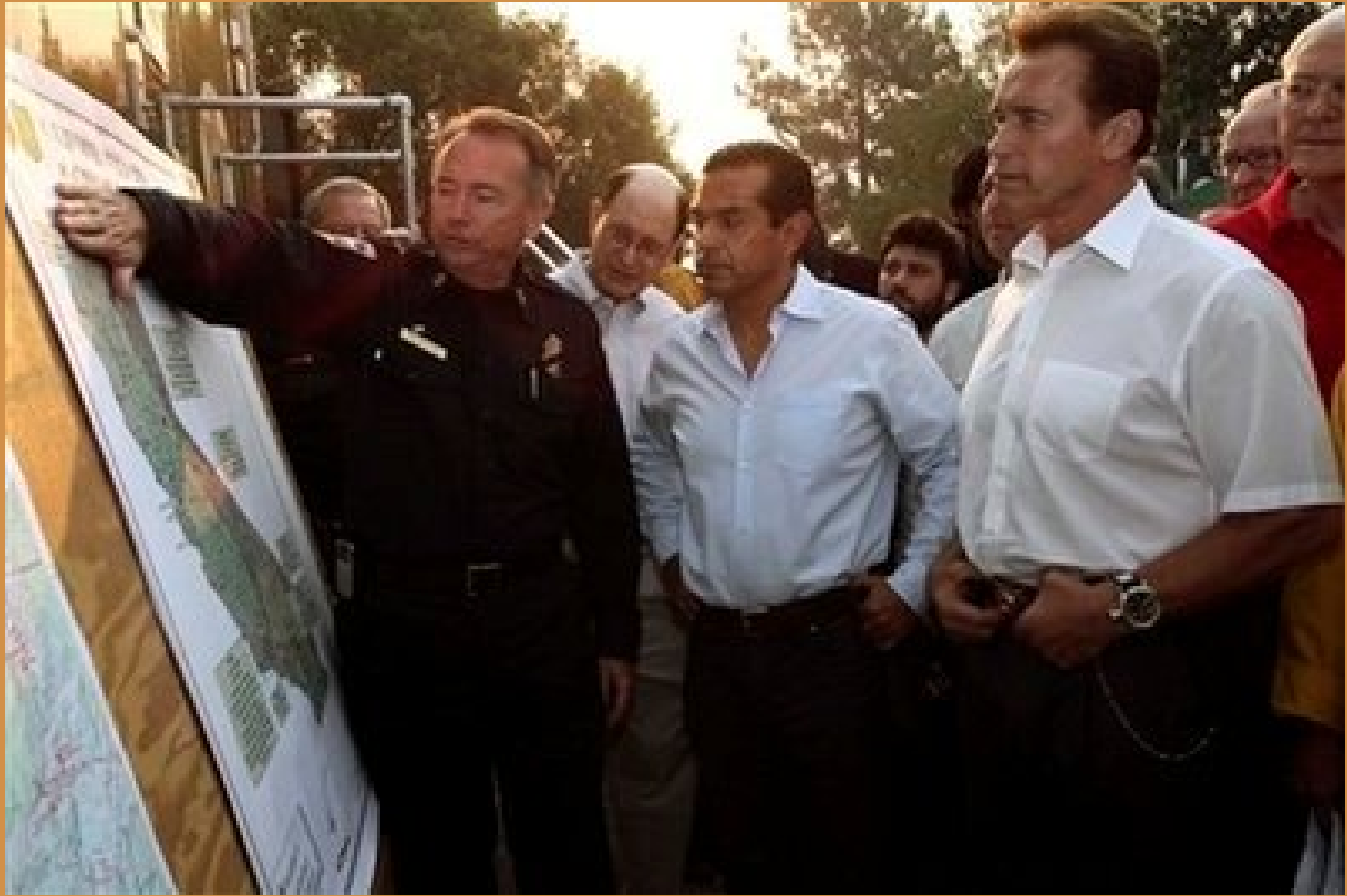
Firefighters Appreciate Fire Retardant Drops





Hundreds of Acton residents listen to L.A. County Deputy Fire Chief Mike Bryant as he uses a large map to detail fire fighting efforts against the Station Fire at High Desert Middle School on Tuesday, September 2, 2009.



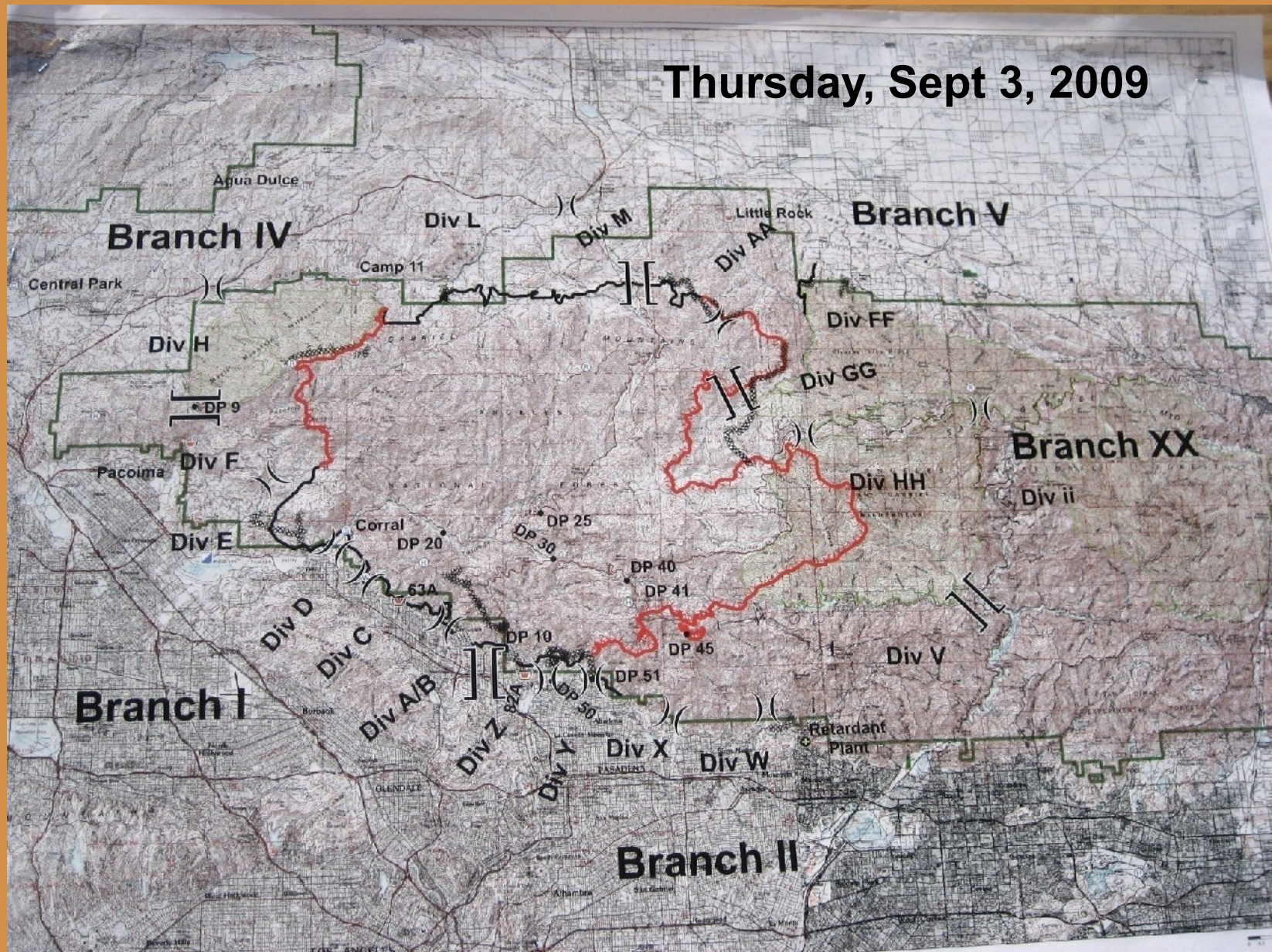


California Gov. Arnold Schwarzenegger, right, and Los Angeles mayor Antonio Villaraigosa, center, are briefed on the Station fire by Chief Del Walters, director of CAL FIRE, Wednesday, Sept. 2. 2009.



Fire Officials brief the Azusa Community on the status of the Station Fire on September 4, 2009. 250 people attended.

Thursday, Sept 3, 2009



The black lines are where they have containment. The red lines are where the fire is burning uncontrolled. The bunched-up X's near some neighborhoods are where bulldozers have created lines just in case the fire makes it that far.

The Eastern Flank

Pyrocumulus cloud eruptions were visible northeast of Mount Wilson and north of Cogswell Dam on the afternoon of September 4, 2009.

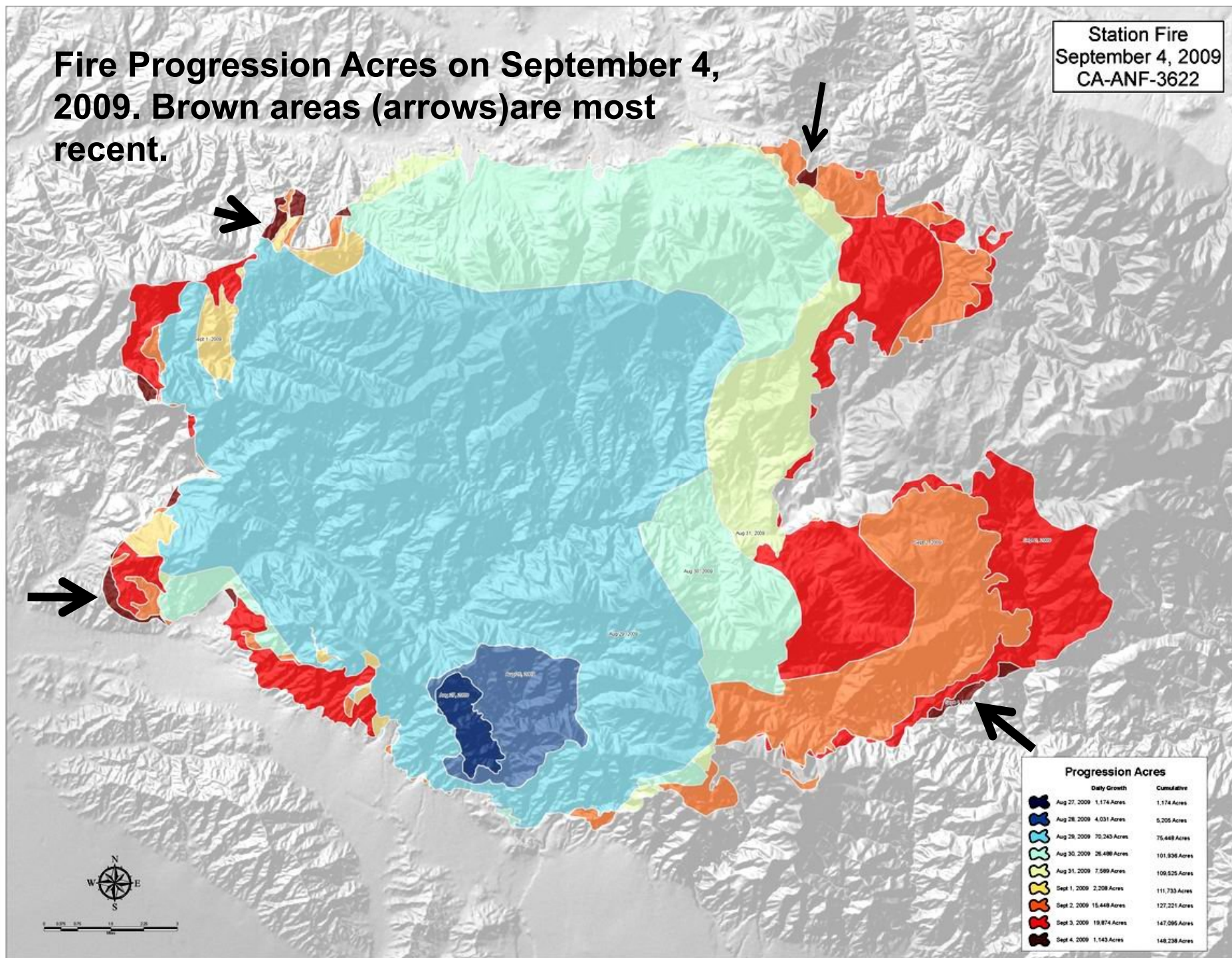






Fire Progression Acres on September 4, 2009. Brown areas (arrows) are most recent.

Station Fire
September 4, 2009
CA-ANF-3622



Containment of Station fire rises to 49% as battle targets the San Gabriel Wilderness on Saturday, September 5, 2009

Firefighters today gained control of the western side of the massive Station fire, including the Little Tujunga and Pacoima canyon areas, and are focusing their attack on the eastern flank deep in the San Gabriel Wilderness above Monrovia and Duarte.

Overnight containment of the 154,000-acre blaze, the largest in Los Angeles County history, rose to 49% as temperatures dropped and humidity rose.



(c) UCLA Department of
Physics and Astronomy
Sep 05 09 21:11:23

September 5, 2009



Web Cam back in operation at Mount Wilson shows glow of eastern flank of the Station Fire in the San Gabriel Wilderness.



Smoke bellows skyward from the eastern flank of Station Fire on September 5 in this view from northern Glendora. No evacuations were ordered and no major residential areas were threatened.

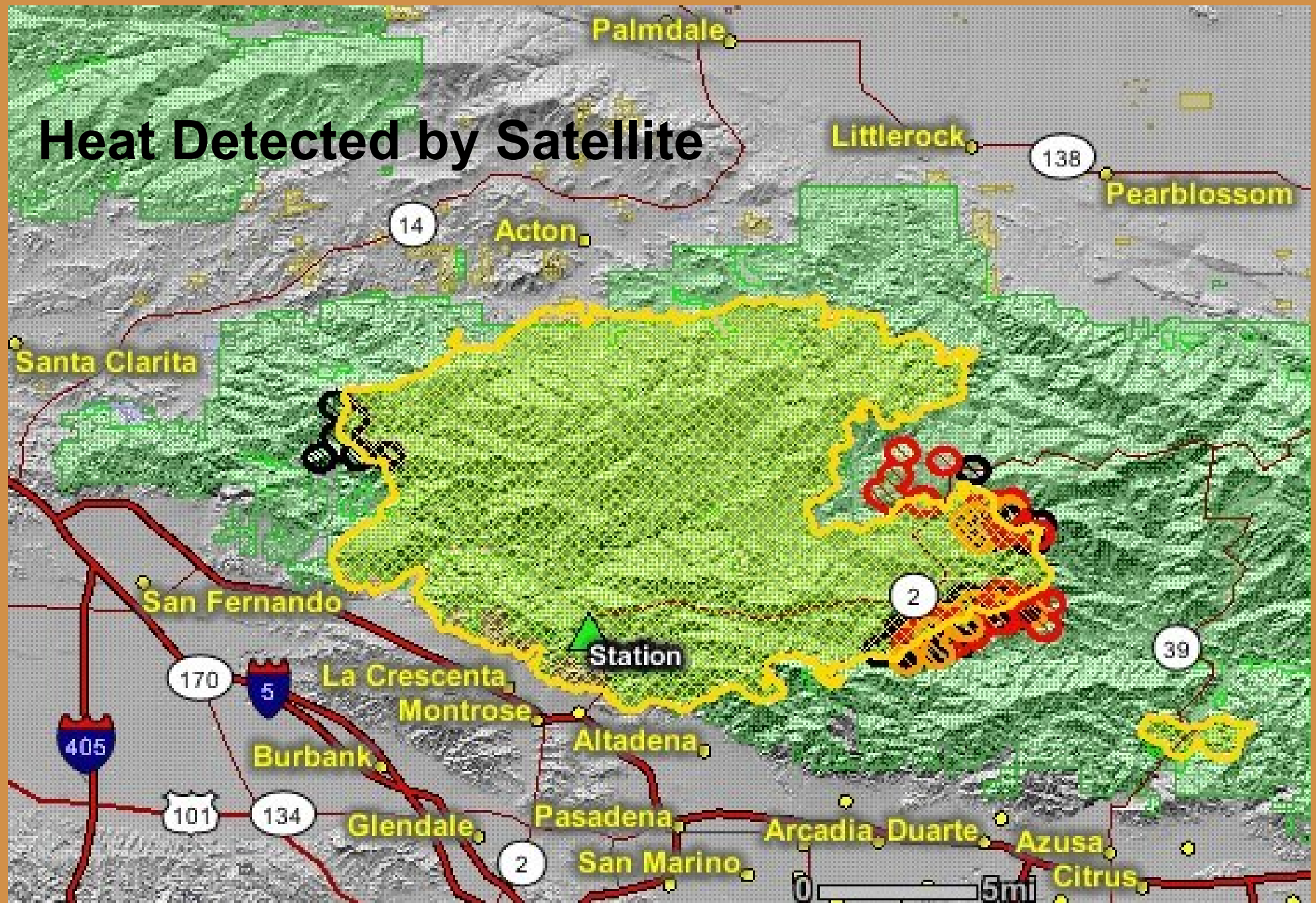


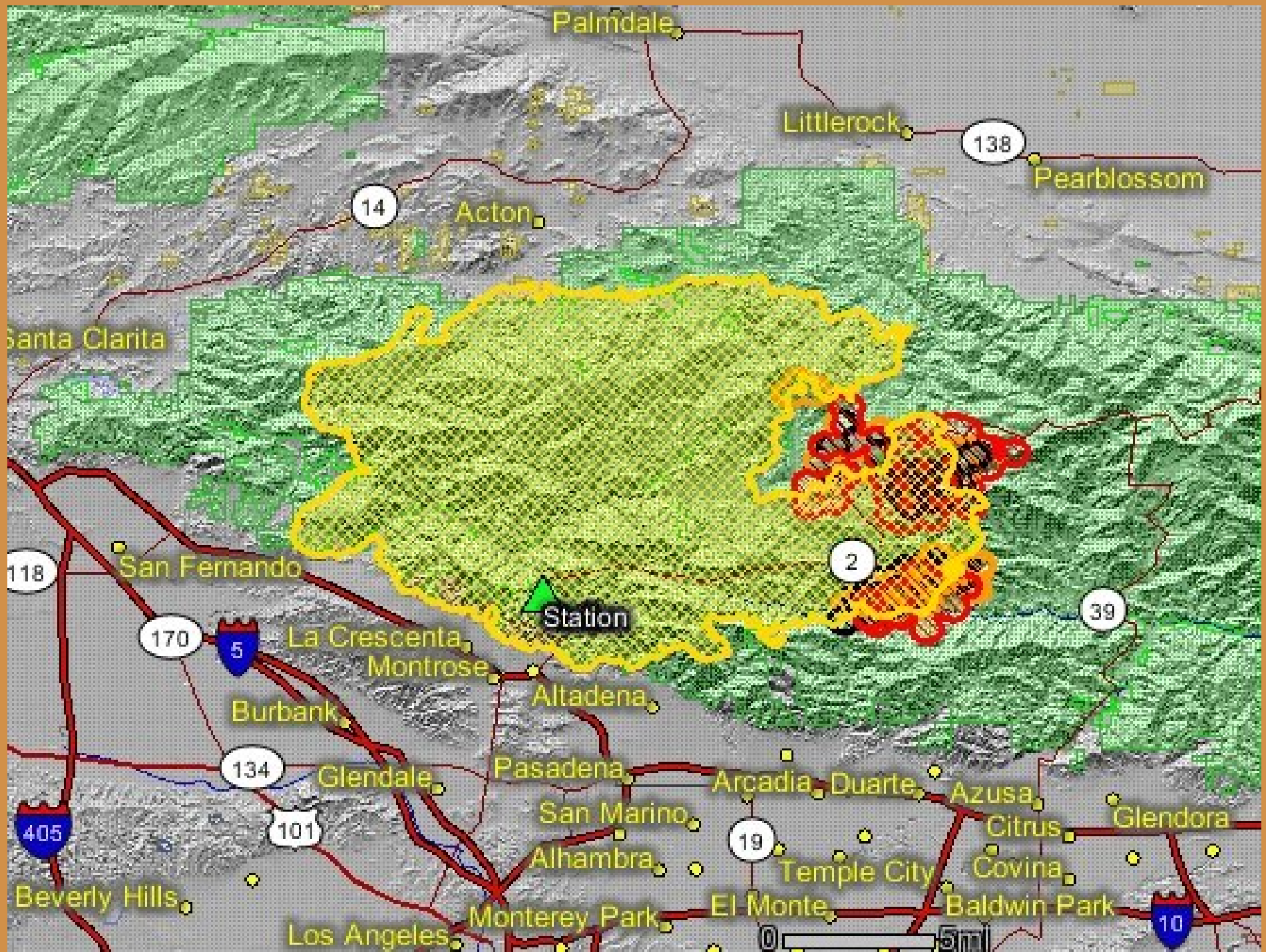
View of eastern flank of Station Fire from Morgan Ranch area just north of Glendora on September 5. The San Gabriel Wilderness area is seen in the background.



Photos courtesy Jim Dowdle, KG6TQT

Heat Detected by Satellite

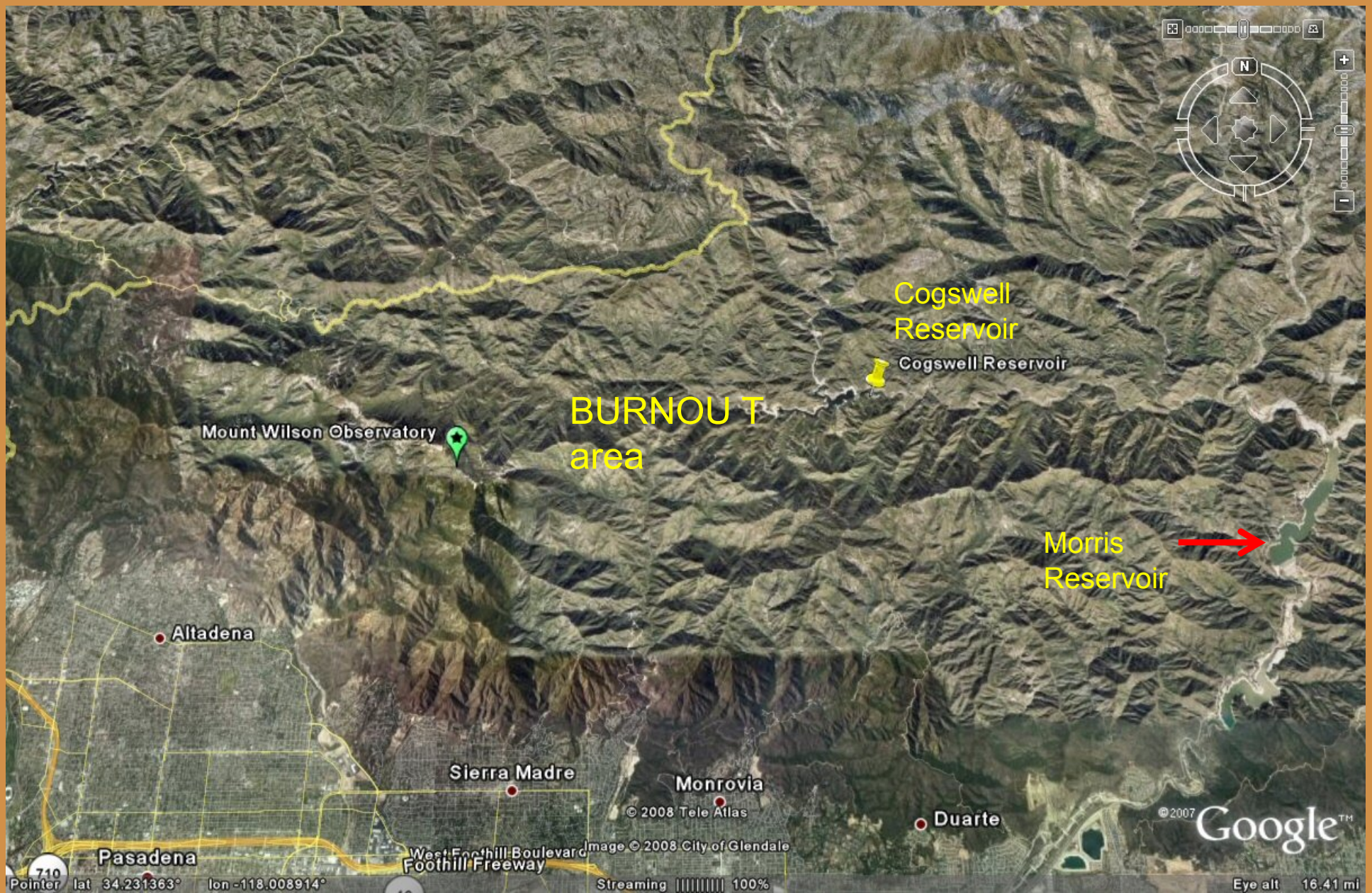




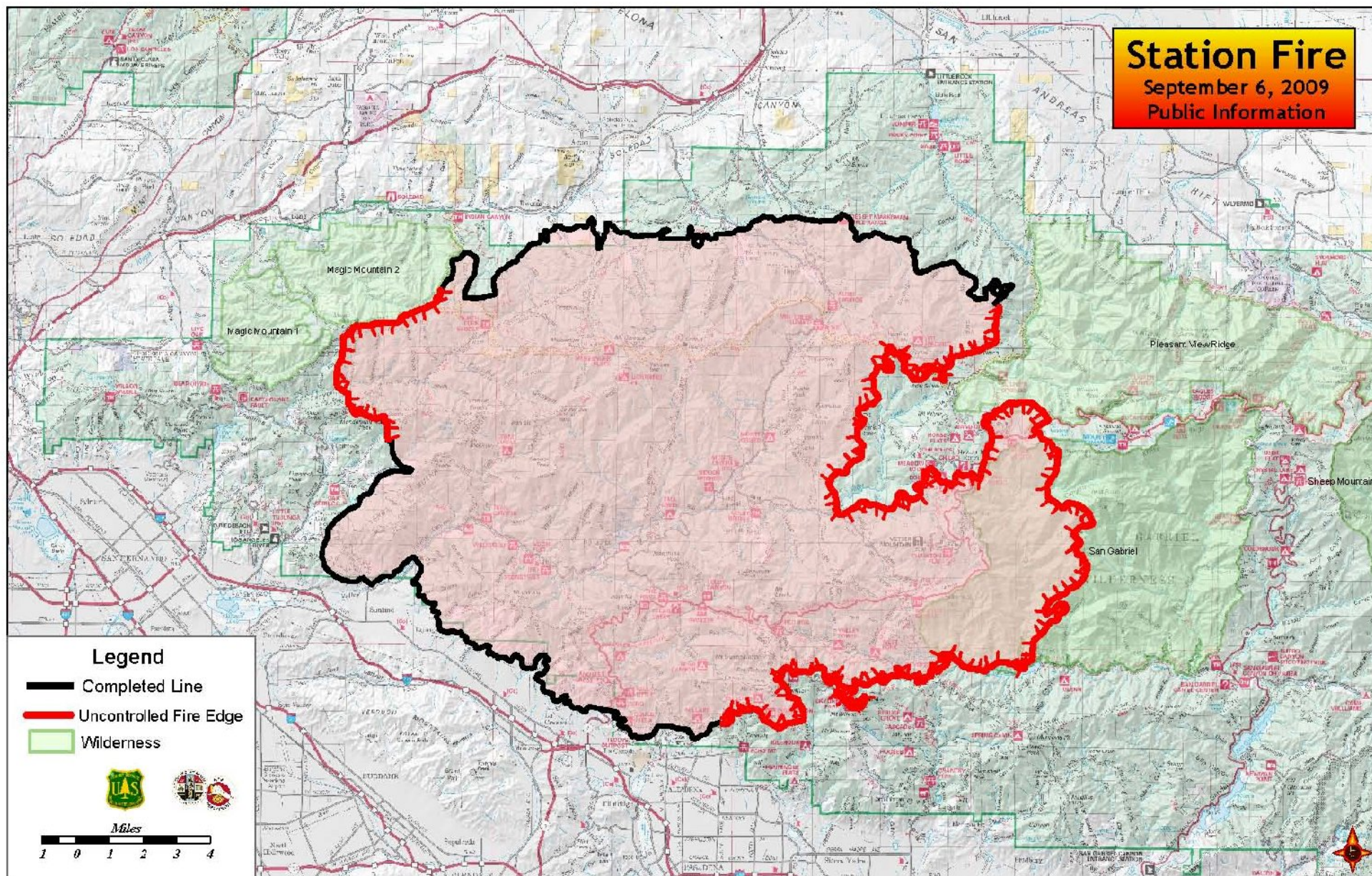








Burnout

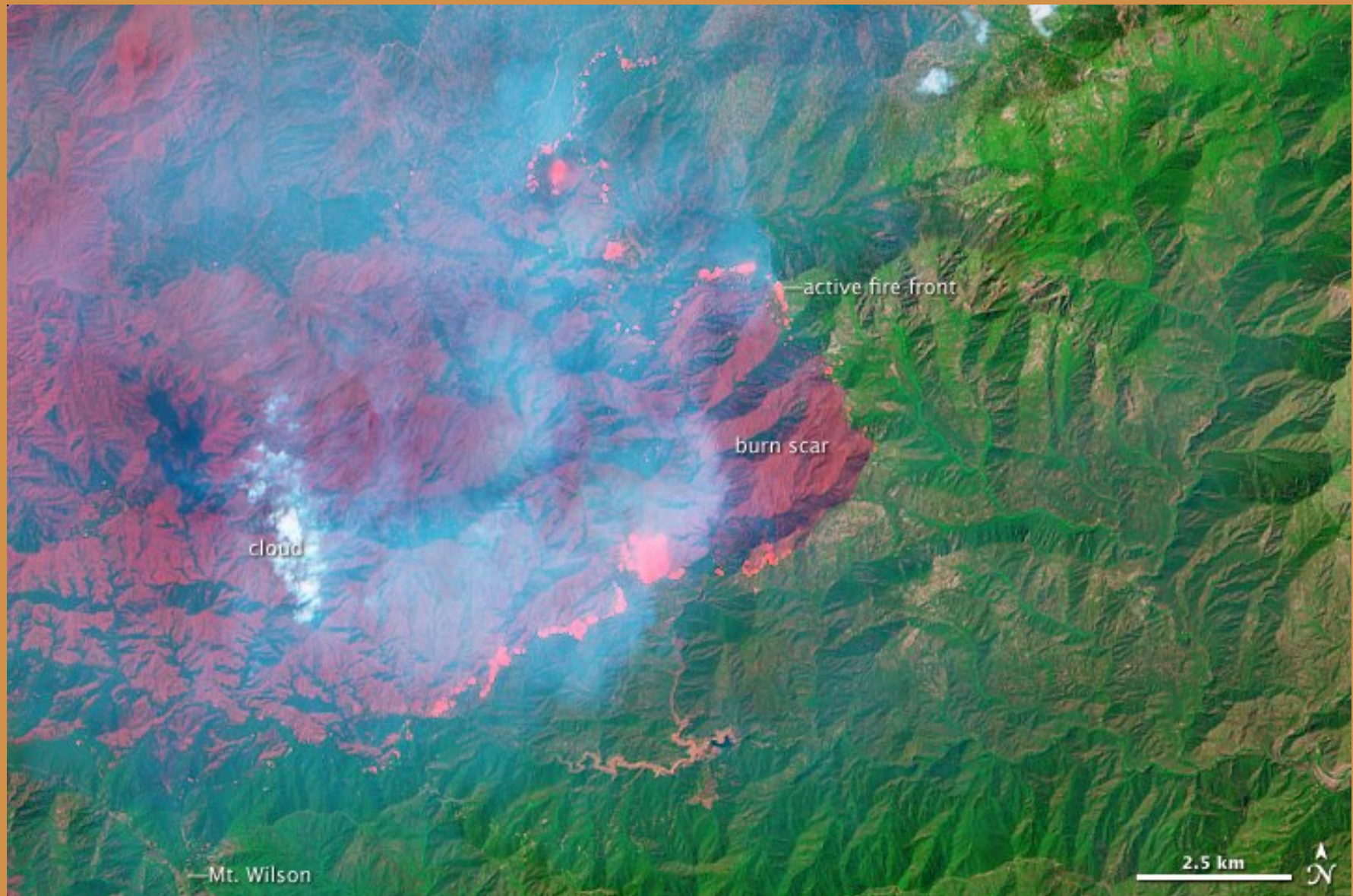


Red Lines indicated uncontrolled fire edge of the Station Fire on September 6, 2009.



Juniper Hills

Infrared Satellite Imagery







**Last smoke from burnout area
east of Mt. Wilson, taken from
tower camera on September 13.**



Fire Fighting Strategy

"We do something, the fire does something different," said Michael Bryant, an L.A. County deputy fire chief, comparing the battle to a chess match.



AIR ATTACK

The S64 Erickson Air Crane





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Skycrane completes water drop on Station Fire



Fueling and maintenance operations of CH-54B Sky Cranes were conducted at Brackett Field in La Verne.

Photos courtesy Don Hayden, KF6HZX



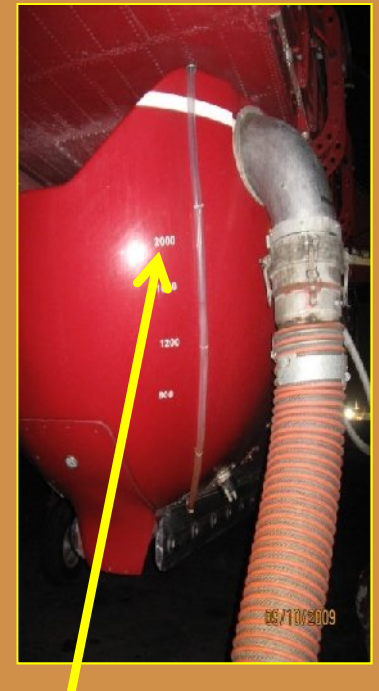


The crew compartment on the CH-54B is small but functional

BUILT FOR POWER



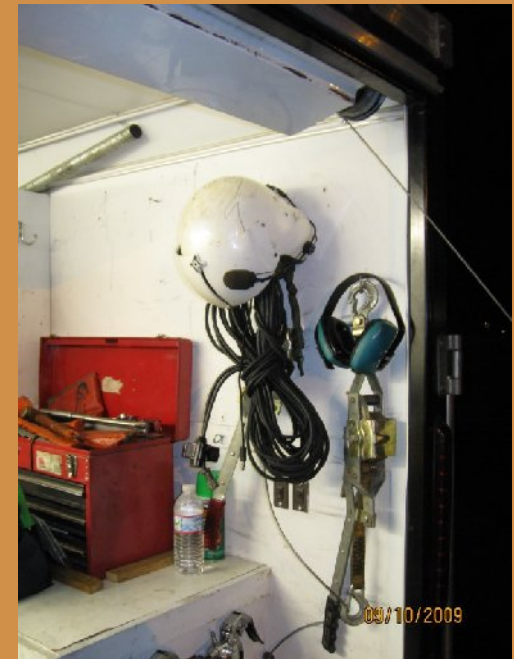
Mechanic climbs down after an inspection. Compare him to the size of the Pratt & Whitney Turboshaft engine above him.



**2000 gallon
fill level
gauge**

**Submersible hydraulic Pump at end of
snorkel can fill 2,000 gallons in less
than a minute.**





This portable Skycrane maintenance workshop at Brackett Field is owned by Helicopter Transport Services of Baltimore, MD

Photos courtesy Don Hayden, KF6HZX

AERIAL IGNITION SYSTEMS

Backfires are set by Aerial Ignition Systems

Helitorches



If weather and fire conditions are favorable, firefighters may use aerial ignition equipment on helicopters to burn out or backfire areas on the southeast side of the fire in the wilderness areas.



**Most of us
will never see
backburns
started by
helicopters!**



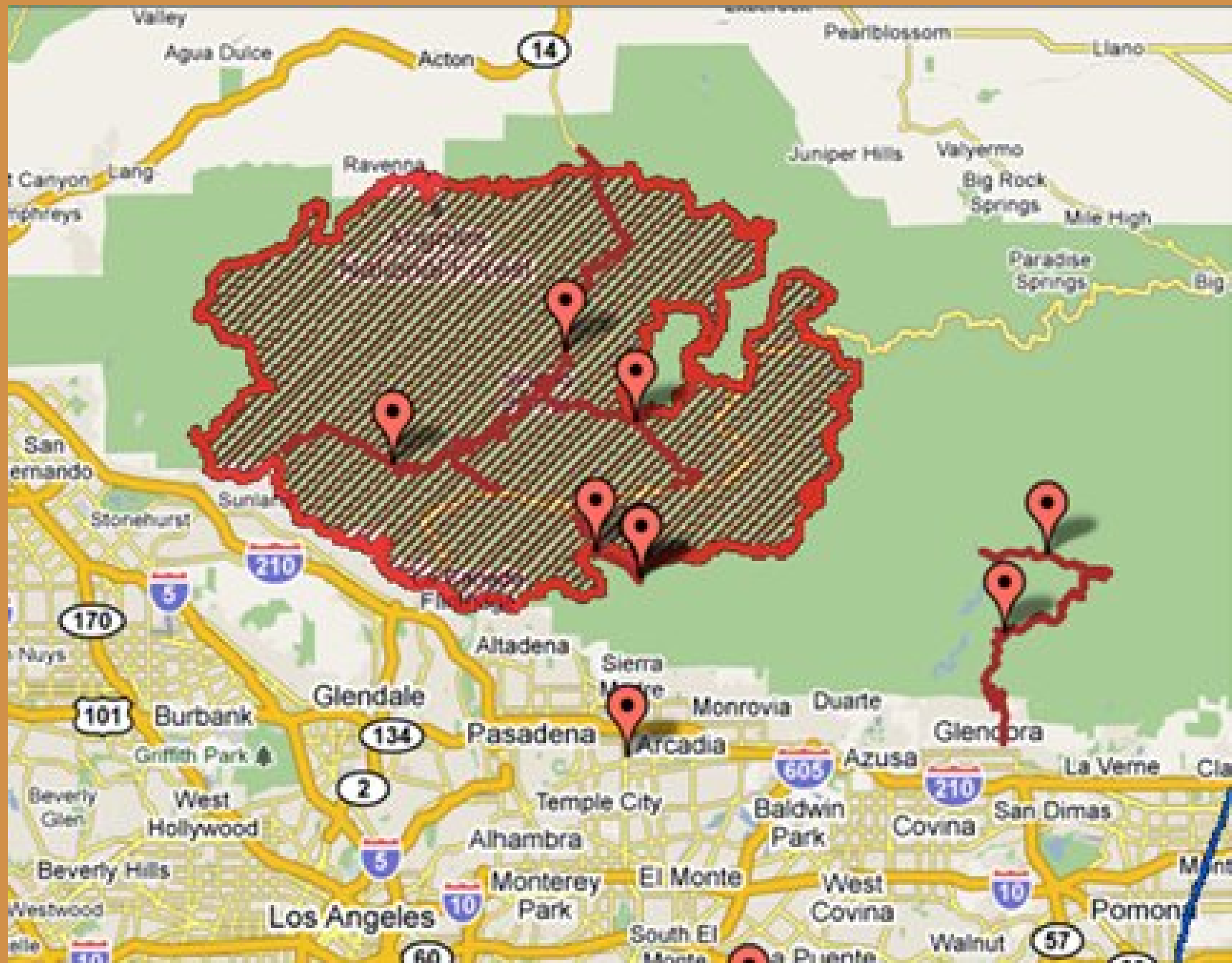
CLOSURES



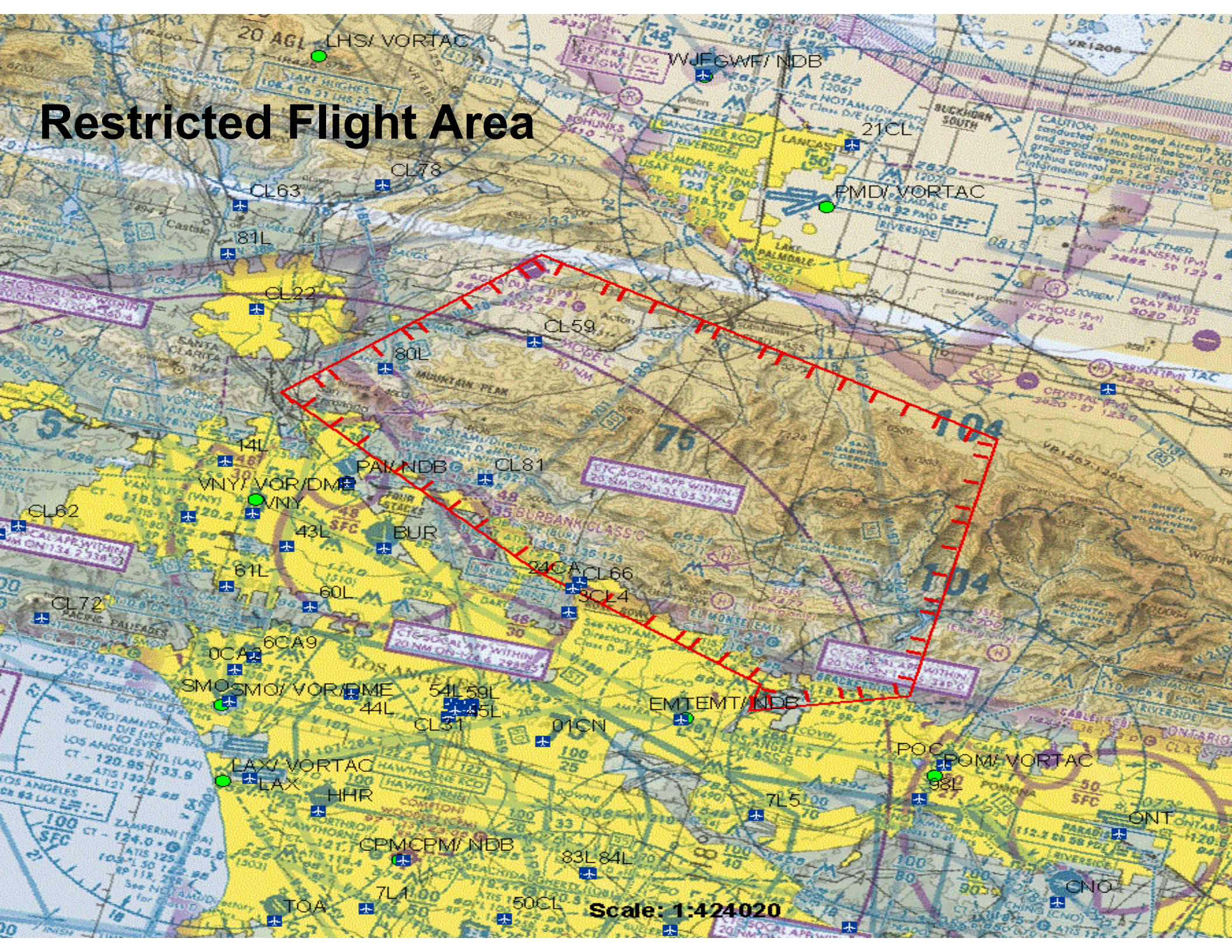


Going into or being upon National Forest System lands, roads, or trails within a closure area is not allowed.

Road Closures on 9/11/09



Restricted Flight Area



In Summary:

Station Fire
September 7, 2009
CA-ANF-3622

Station Fire Progression Map

Fire Progression

| | Daily Growth | Cumulative |
|-----------|--------------|---------------|
| 8/26/2009 | 1,174 Acres | 1,174 Acres |
| 8/27/2009 | 4,031 Acres | 5,205 Acres |
| 8/28/2009 | 31,772 Acres | 36,977 Acres |
| 8/29/2009 | 57,160 Acres | 94,137 Acres |
| 8/30/2009 | 7,638 Acres | 101,775 Acres |
| 8/31/2009 | 13,644 Acres | 115,419 Acres |
| 9/1/2009 | 21,400 Acres | 136,819 Acres |
| 9/2/2009 | 7,302 Acres | 144,121 Acres |
| 9/3/2009 | 3,963 Acres | 148,084 Acres |
| 9/4/2009 | 2,401 Acres | 150,485 Acres |
| 9/5/2009 | 4,241 Acres | 154,726 Acres |
| 9/6/2009 | 2,239 Acres | 156,965 Acres |

Station Fire

September 9, 2009
Public Information

The Station Fire was 62%
contained by September 9, 2009.

160,357 acres

Contained

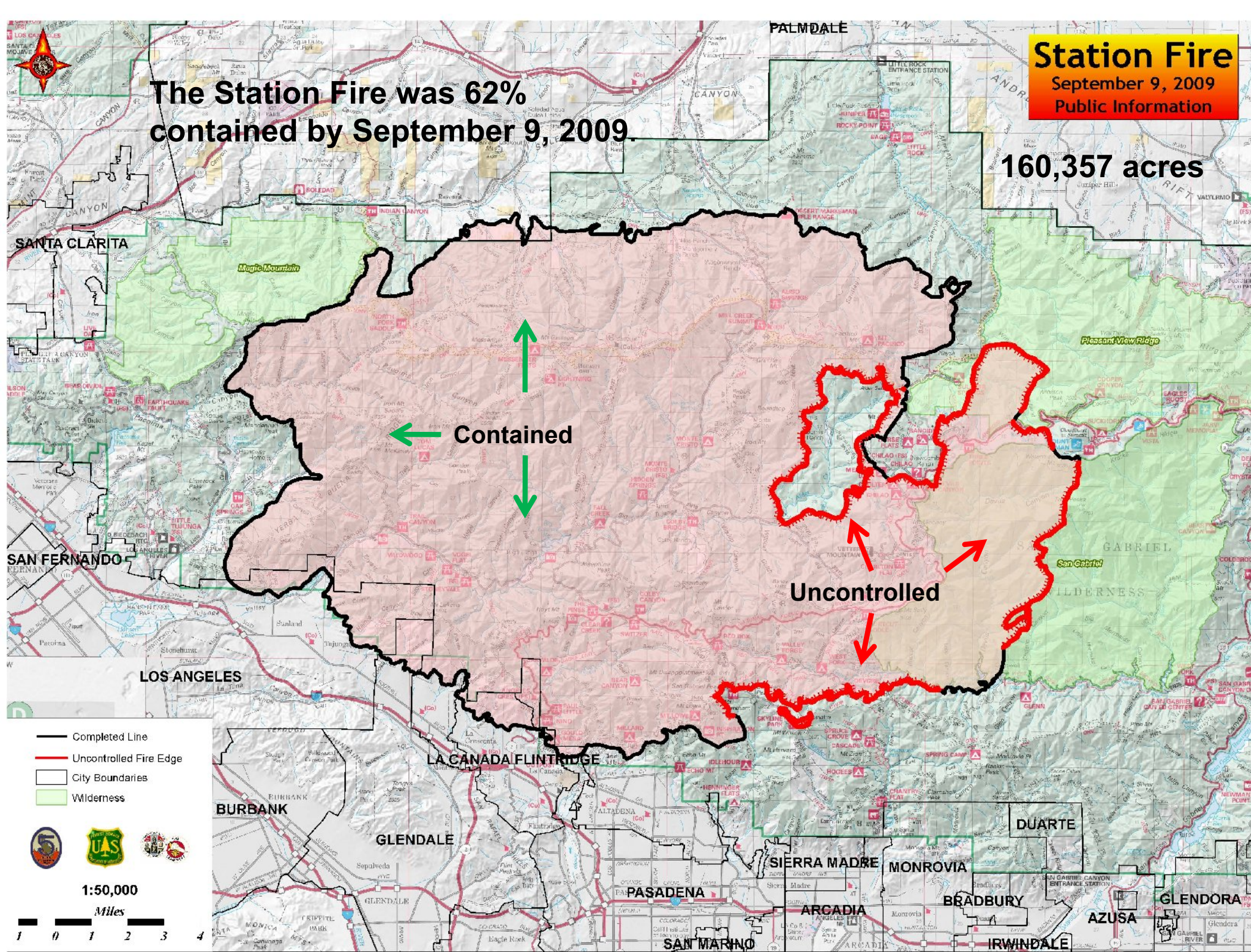
Uncontrolled

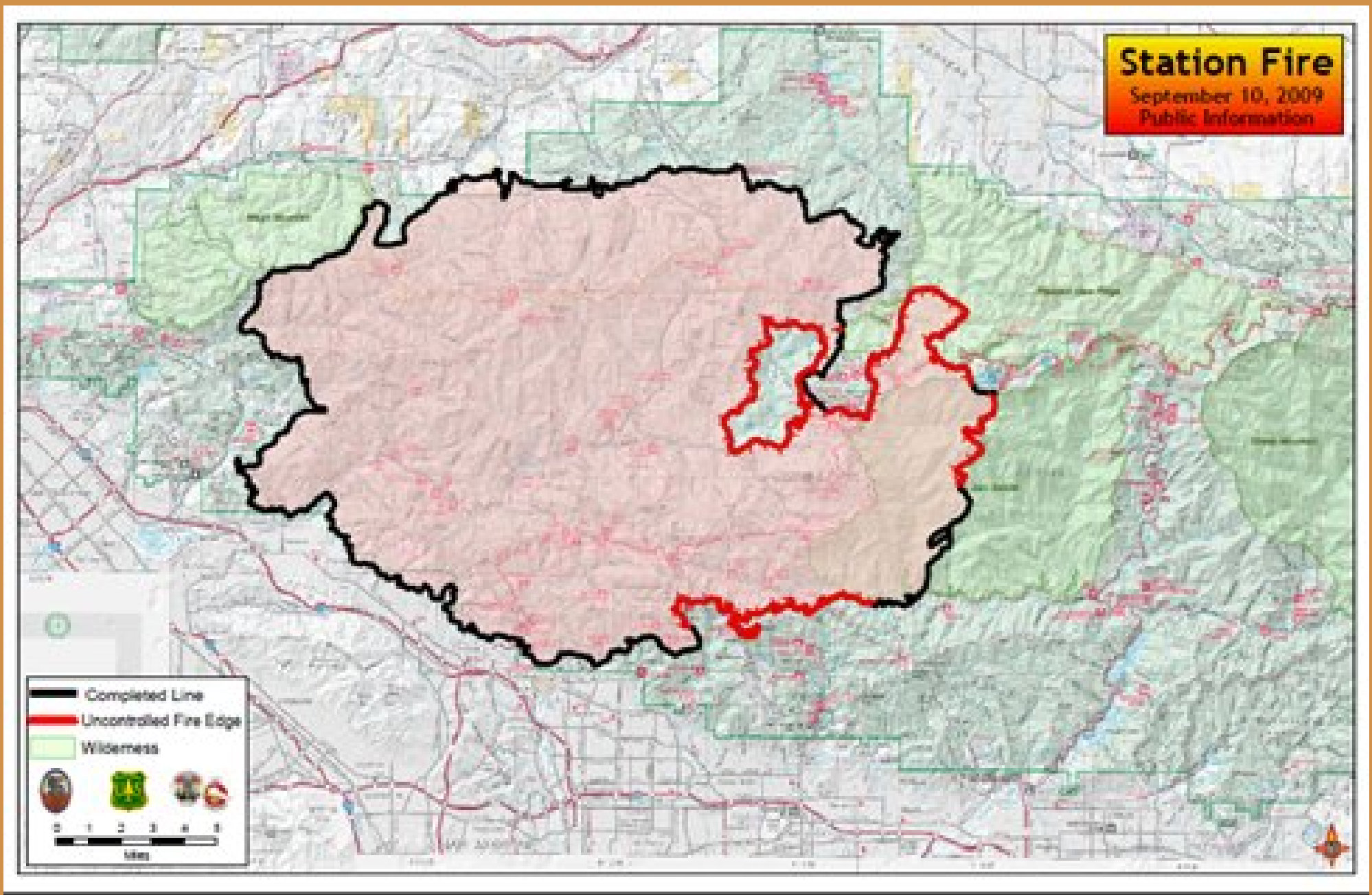
- Completed Line
- Uncontrolled Fire Edge
- City Boundaries
- Wilderness



1:50,000

Miles





Sept 11, 2009 Containment: 77% Acres: 160,557 acres at this time.

Station Fire Update on September 12, 2009

Acres Burned: 160,557 acres

Percent Contained: 84%

RESOURCES

Approximate Personnel Assigned: 2,819

Helicopters: 16

Air Tankers: Available

Engines: 98

Hand Crews: 80

Dozers: 33

Cost to Date: \$88,368,000

Source: <http://inciweb.org/>

We were grateful to meet and thank some of the firefighters who fought the Station Fire in Acton.



THANK YOU, FIREFIGHTERS !

Dear firefighter,
I hope you are
going to be ok
and I hope you
are carefull that is
a big fire.





Dear Fire Fighter
Hope your safe Hope
you did not get heart
thank you for puting
out the fires no
wonder your called
fire fighters because
you fight fires. Love
Jordan



Just Saying So

“Thank you is not enough.

The firemen fighting all the major fires can’t be thanked enough for their hard, hot work that they have been doing these last few weeks.

I see the snorkel choppers going by from sun up until almost dark. That in itself has to be a very tiresome job.

All I can say is thank you very much, all of you.

I’m very sorry about the loss of two firemen and all the structures.”

Mike Michelsen
Glendora

– Tribune, Thursday September 10, 2009.



5 - 5 - 5


The Last Alarm Bell

The Hotshot's Prayer

*When I am called to duty, Lord
To fight the roaring blaze,
Please keep me safe and strong
I may be here for days.
Be with my fellow crewmembers,
as we hike up to the top.
Help us cut enough line,
For this blaze to stop.
Let my skills and hands
be firm and quick.
Let me find those safety zones,
as we hit and lick.
For if this day on the line,
I should lose my life,
Lord, bless my Hotshot Crew,
my children and my WIFE.*

Fighting forest and brush fires is very dangerous work. It is very exhausting work. Many sacrifices are made, including the ultimate. This is a nation of people who are eternally grateful for these heroes. Our heroes are our everyday people, the true-grit of our nation.





The 2009 Fire Season
is not over. Vigilance and
Preparedness will
continue....

THE END

