

# San Diego County Vegetation Treatment Strategy

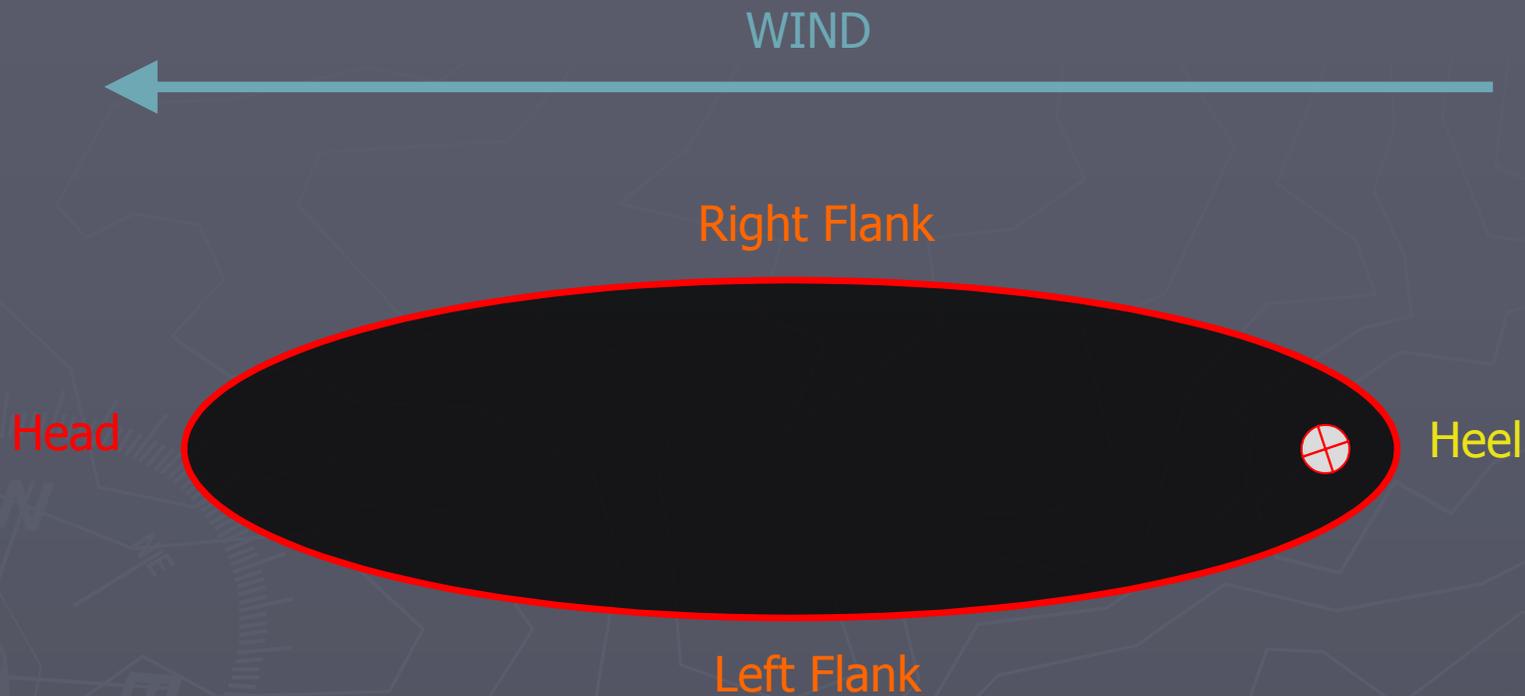
Presented by Thom Porter  
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&  
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San Diego County Fire Marshal

# Fuel Driven Fire



Fire Anatomy

# Wind Driven Fire



Fire Anatomy

# A Systems Approach to Community Protection

Gregory Schreiner  
Fire Marshal  
San Diego County Fire Authority

# Framework for the Discussion

If we chose too,  
we could begin our discussion in 1793 when the  
Spanish Governor prohibited burning by  
Indians...

Instead I would like to focus on the last 10 years  
and describe the systematic approach that has  
evolved related to community protection from  
wildfire in San Diego County.

# 2003 Cedar Fire

- 280,278 acres were consumed...
- 5,234 structures were damaged or destroyed...
- 14 lives were lost...

***Clearly*** a game changer for San Diego  
County  
(Particularly for the Fire Service)

# The Blame Game Begins

- ▶ “The County should not allow homes to be built in the backcountry....”
- ▶ “The environmentalist won’t let us clear our land...”
- ▶ “The fire service in San Diego is disorganized and ineffective...”

*(And my all-time favorite)*

*If I only had (XX) more fire engines....*

pick a number,  
any number, and  
fill in here....

# Our Response

- ▶ We knew:
  - none of these perspectives were entirely correct...
  - there was no “Silver Bullet”....
- ▶ Set about on a process of analyzing the event and put in motion what has become a multi-year effort implement a “systems approach” to address community protection in the WUI environment.

# Key Elements

- ▶ Code Development
- ▶ Defensible Space
- ▶ Planning and Land Development Policies

# Code Development

## Ignition-Resistant Construction:

(Many of these amendments were subsequently incorporated into Chapter 7A of the California Building Code)

Firefighting Water Supplies

Emergency Vehicle Access Roads



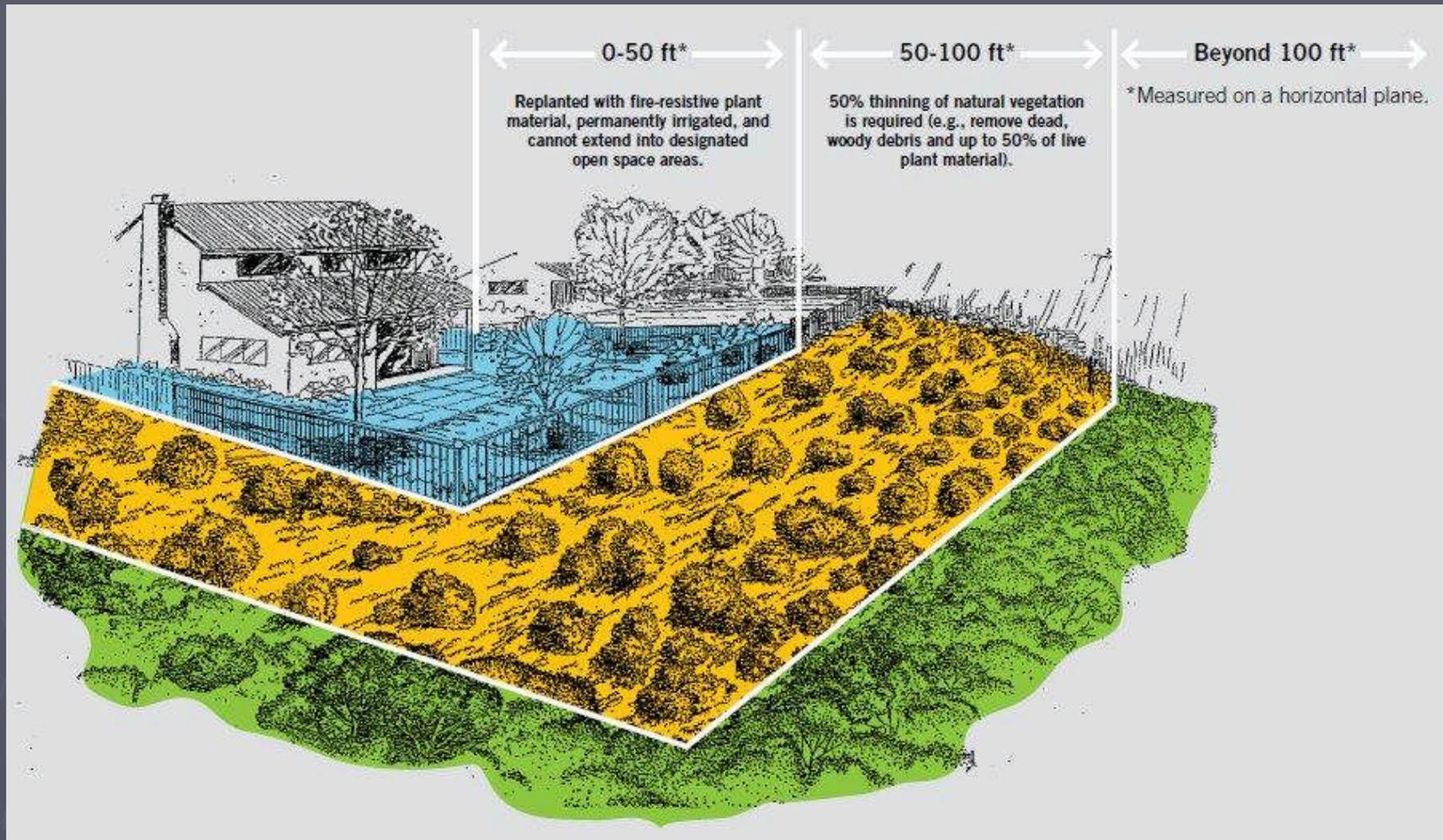




# Defensible Space

- ▶ Adopted “one message” for our communities
  - ▶ 100’ of D-Space in two 50’ zones
    - First 50’ is the landscape zone
    - Second 50’ is the thinning zone

Standardized the Legal Noticing and Enforcement mechanism





▣ Before



▣ After



▣ Before



▣ After

# 2012 Defensible Space Inspections

- ▶ Engine Company Based: 7350
- ▶ Defensible Space Teams: 7181
- ▶ Total Combined Inspections: 14,481

# Planning and Land Use Policies

## ▶ New General Plan Policies:

### Safety Element

- Minimize islands, pockets and peninsulas of combustible vegetation within new developments
- Requires developments to be located, designed and constructed to provide adequate defensibility (FPP)
- Requires access roadways sufficient to provide ingress/egress for emergency vehicles and civilian evacuation concurrently (Title 14)

### Mobility Element:

- Interconnected local road networks as well as road design features.

# The Payoff...

- ▶ In 2007 Witch and Harris Fires, the overall loss rate for structures located in the burn area was 13%...
- ▶ For those structures in the burn area that were built using the “post 2003” systems approach...
- ▶ The loss rate was approximately 2%.

# Are We Done Yet?

- ▶ No....
- ▶ Continual process
- ▶ It takes years to incorporate code amendments and policy changes
- ▶ It takes years more to see the results of those code amendments and policy changes

# Harmony?

- agreement; accord; harmonious relations.
- a consistent, orderly, or pleasing arrangement of parts; congruity

































# **Fuels and Fire History**

Mediterranean climate – Dry summer  
subtropical climate with winter rainfall

# **Fuels in a Mediterranean ecosystem:**

- Fuels in a Mediterranean ecosystem are dominated by a chaparral-type shrubland plant community. This plant community is comprised of species that tolerate fire by various methods resistance, and in some cases, the vegetation requires fire for regeneration.

# **Fire History in a Mediterranean ecosystem:**

- Fire history in a Mediterranean ecosystem is typically characterized by a relatively high intensity, stand-replacing fire regime. In addition, periods of extreme fire weather, such as the hot and dry Santa Ana winds of southern and central California can drive fire through vegetation types that might not otherwise readily burn.

# Public Resources Code 4130

## BOARD OF FORESTRY SHALL:

- **classify all lands within SRA based on:**
  - types of cover
  - beneficial use of water
  - probable erosion damage
  - fire risks and hazards
- **prepare a plan for wildland fire protection**
- **determine intensity of fire protection**
- **like lands receive equal levels of protection**



# **CALIFORNIA FIRE PLAN**

- **Goal : To reduce total government costs and citizen losses from wildland fire in California by protecting assets at risk through focused Pre-Fire Management prescriptions and improving initial attack success.**

# Plan Framework

1. Initial Attack Success
2. Asset Protection
3. Pre-Fire Management
4. Fiscal Framework



# **FUELS MANAGEMENT**

# Pre-Fire Management

- **Goal: to design site and time specific projects that will protect assets and increase initial attack success.**



# **THE VEGETATION MANAGEMENT PROGRAM**

- **A tool used to accomplish the goal of the Fire Plan.**

**Methods Include: Prescribed Fire \***

**Manual and Mechanical  
Treatment of Fuels**

**Fuel Break and Roadside  
Maintenance**

**\*Usually the most cost effective method.**

# Prescribed Fire



# Manual and Mechanical Treatment of Fuels



# Fuel Break and Roadside Maintenance





Fire on the move!



An alternative...

# **BAILEY FIRE**

**Incident #4RRU 28530**

**June 25 - 31, 1994**

## **Facts:**

- Fire start: June 25 at 0000 hours.**
- Location: Terwilliger Valley south of the community of Anza, Riverside County, CA**
- Initial attack report by the CDF engine crew at Anza FFS was 50+ acres with rapid spread.**
- Final acreage: 6,420**

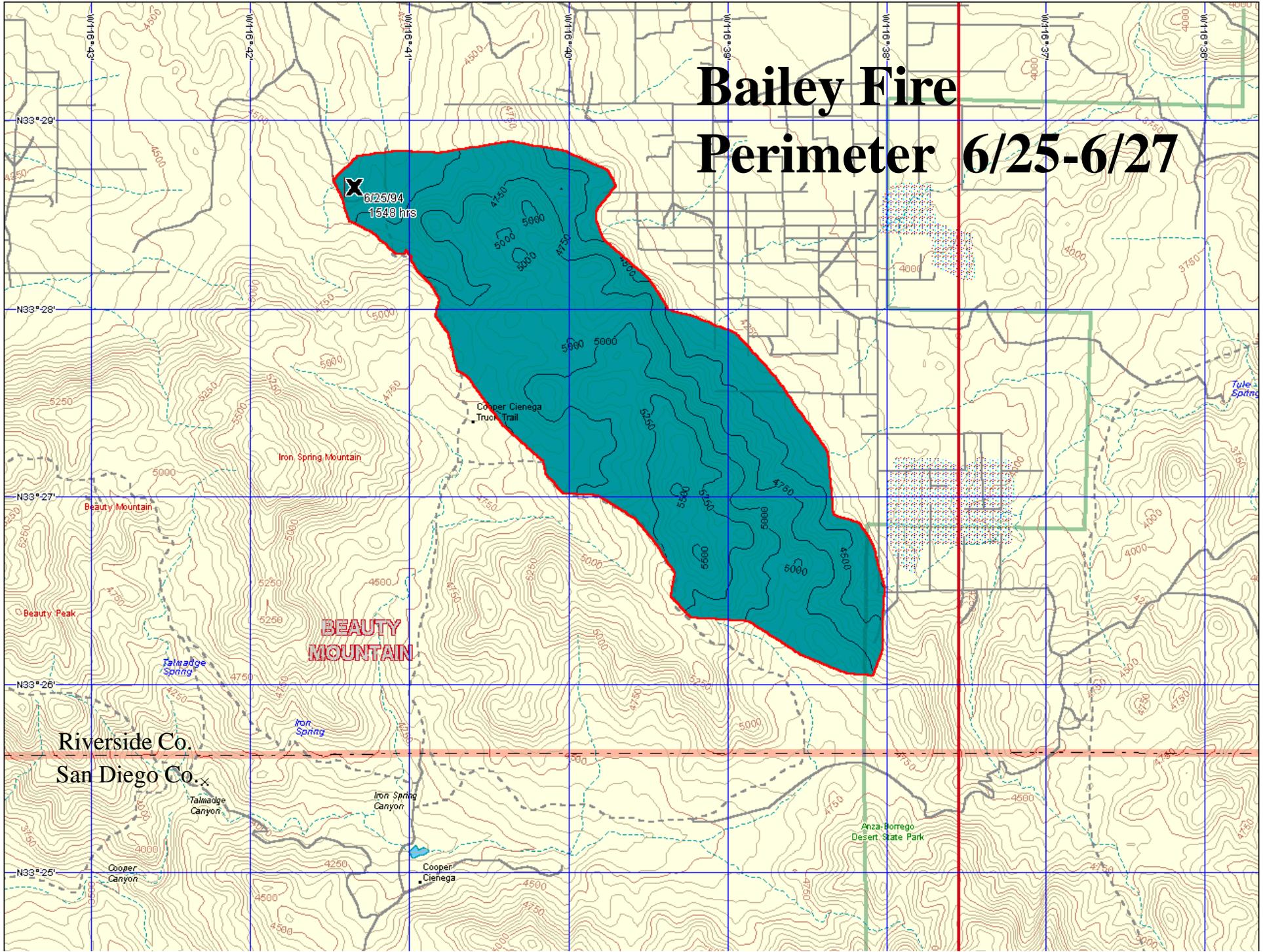
# Burning Conditions

- **Weather: Hot and dry. Strong down drafts created by dry thunder heads over the Santa Rosa and San Jacinto mountains.**
- **Fuel: 50-year + red shank, desert sage, ceanothus and manzanita, very little grass or ground litter.**
- **Moderate to extreme fire behavior influenced daily in the afternoon by the continuing dry thunder storm activity to the east and northeast.**

# **Pre-suppression Improvements**

- **Beauty Mountain Fuel Break, two miles south of fire's origin - south of the Terwilliger Valley at the Riverside/San Diego County line.**
- **Beauty Mountain VMP - CDF maintained. Last treated: January 1984.**
- **Cooper-Cienega and Beauty Mountain Truck Trails - CDF maintained.**
- **Two, 10,000 gallon fire suppression water tanks on the Beauty Mountain and Cooper-Cienega Truck Trails, CDF owned and maintained.**

# Bailey Fire Perimeter 6/25-6/27



Riverside Co.

San Diego Co.

**BEAUTY  
MOUNTAIN**

Anza-Borrego  
Desert State Park

X  
6/25/04  
1648 hrs

Cooper Cienega  
Truck Trail

Iron Spring Mountain

Beauty Mountain

Beauty Peak

Talmadge Spring

Iron Spring

Talmadge Canyon

Iron Spring Canyon

Cooper Cienega

Cooper Canyon

Tule Springs

# Bailey Fire Perimeter on 6/28

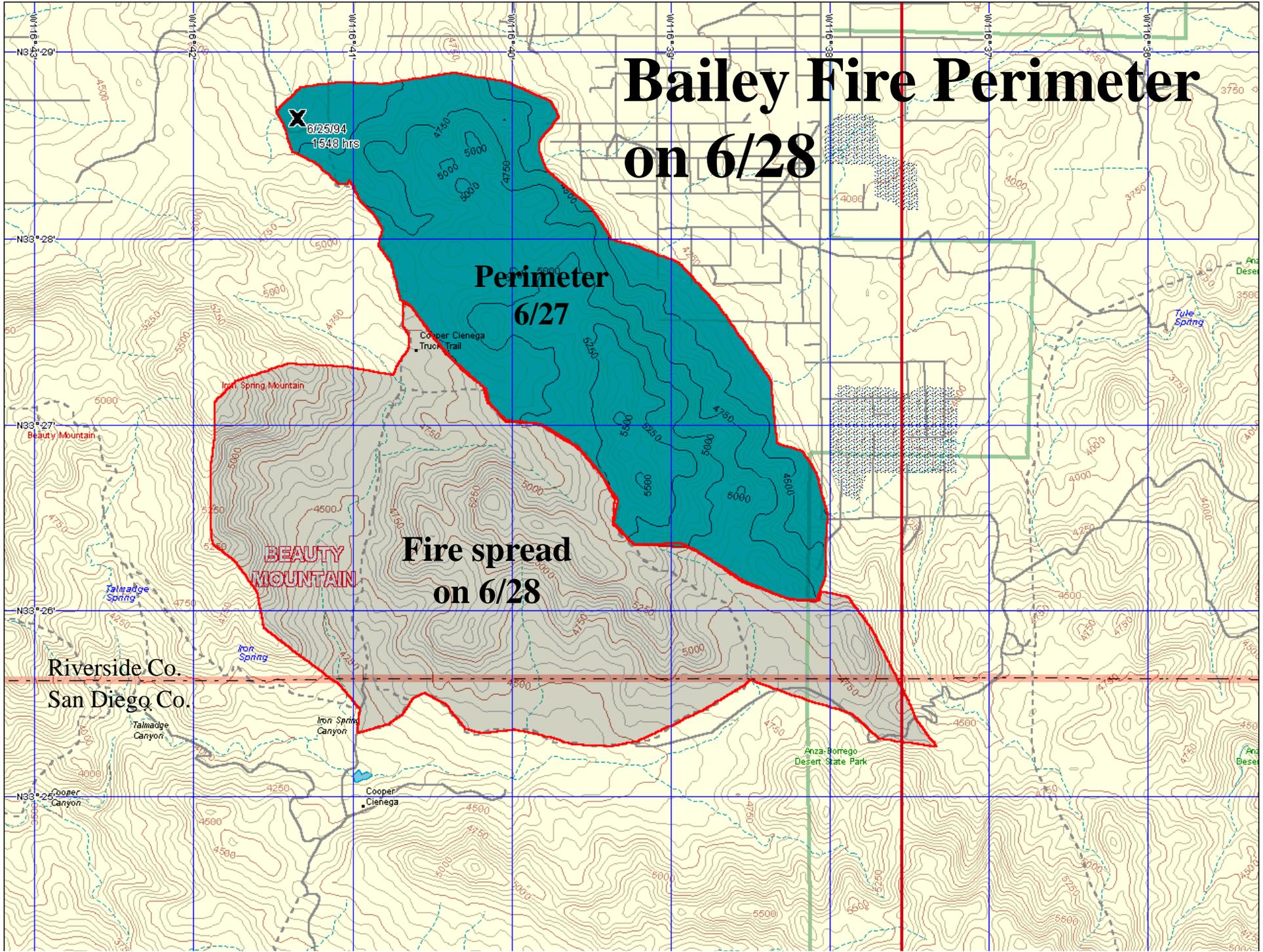
X  
6/25/04  
1648 hrs

Perimeter  
6/27

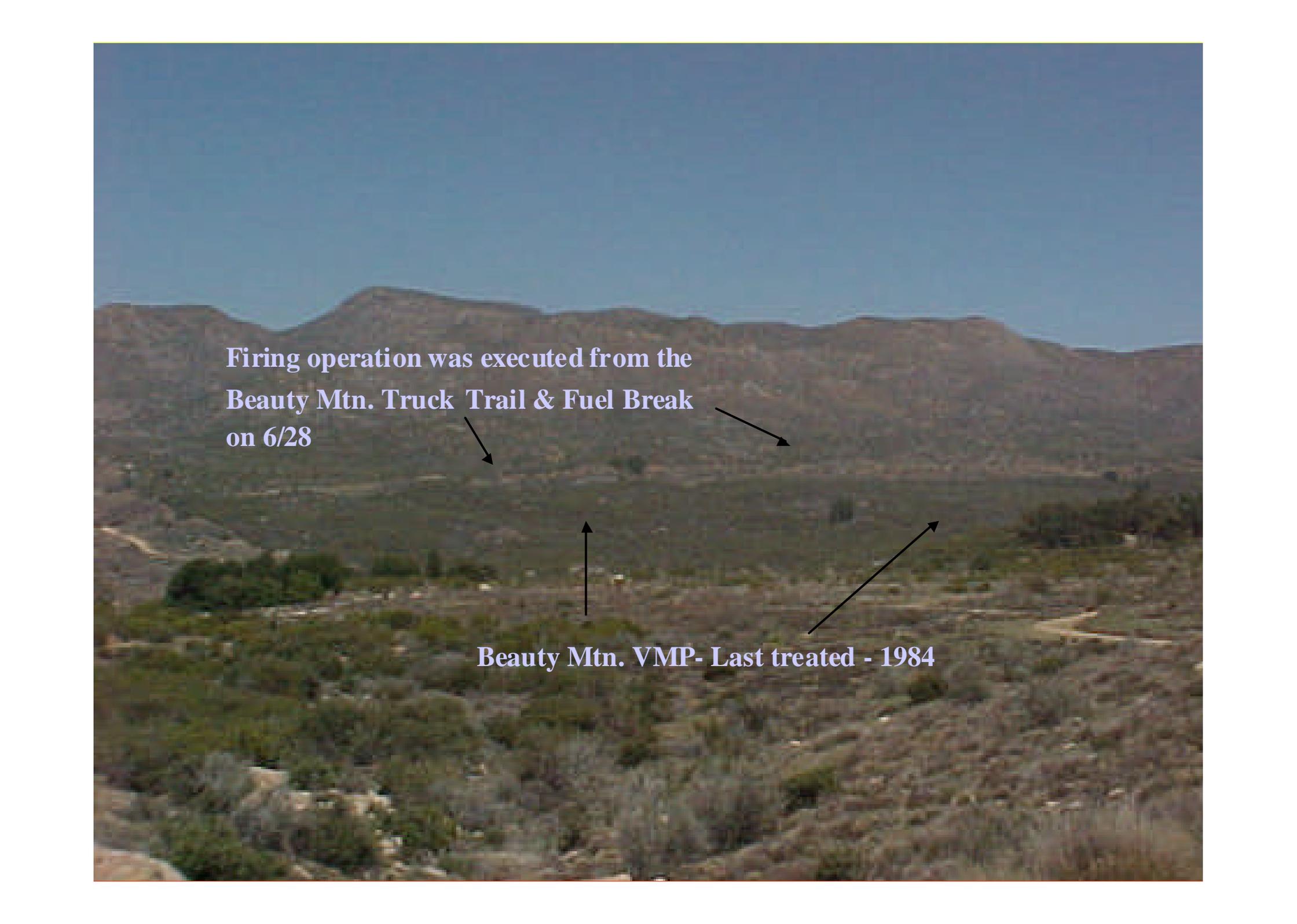
Fire spread  
on 6/28

BEAUTY  
MOUNTAIN

Riverside Co.  
San Diego Co.



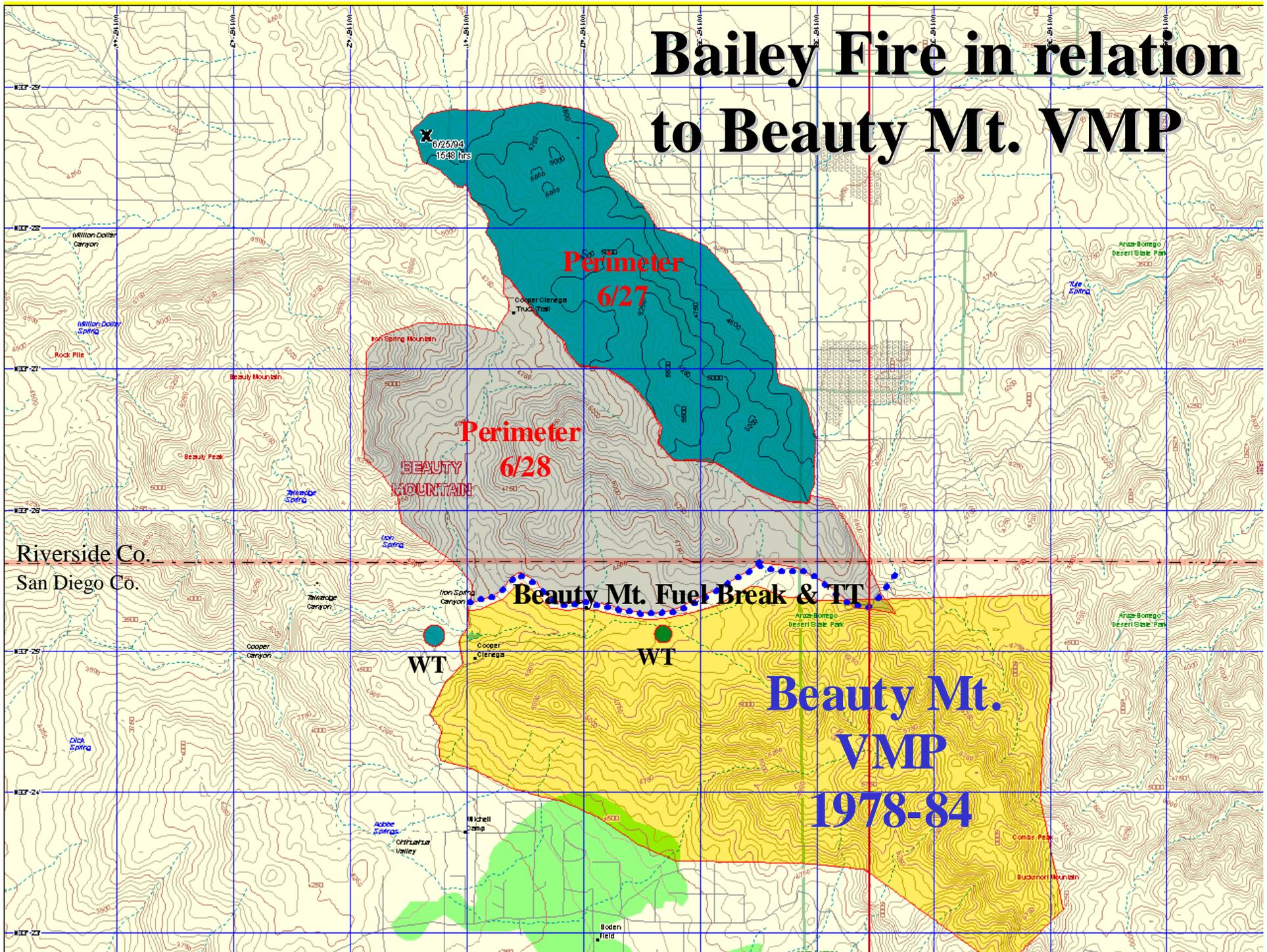




**Firing operation was executed from the  
Beauty Mtn. Truck Trail & Fuel Break  
on 6/28**

**Beauty Mtn. VMP- Last treated - 1984**

# Bailey Fire in relation to Beauty Mt. VMP



Riverside Co.  
San Diego Co.

WT

WT

Perimeter  
6/28  
BEAUTY MOUNTAIN

Beauty Mt. Fuel Break & TT

Beauty Mt.  
VMP  
1978-84

Perimeter  
6/27

1978-84

# Beauty Mountain Area Today

View is looking south to north from San Diego County

Beauty Mtn. Truck Trail & Fuel Break

Cooper Cienega Truck Trail & Fuel Break

Fire protection tank - 10,000 gal. water



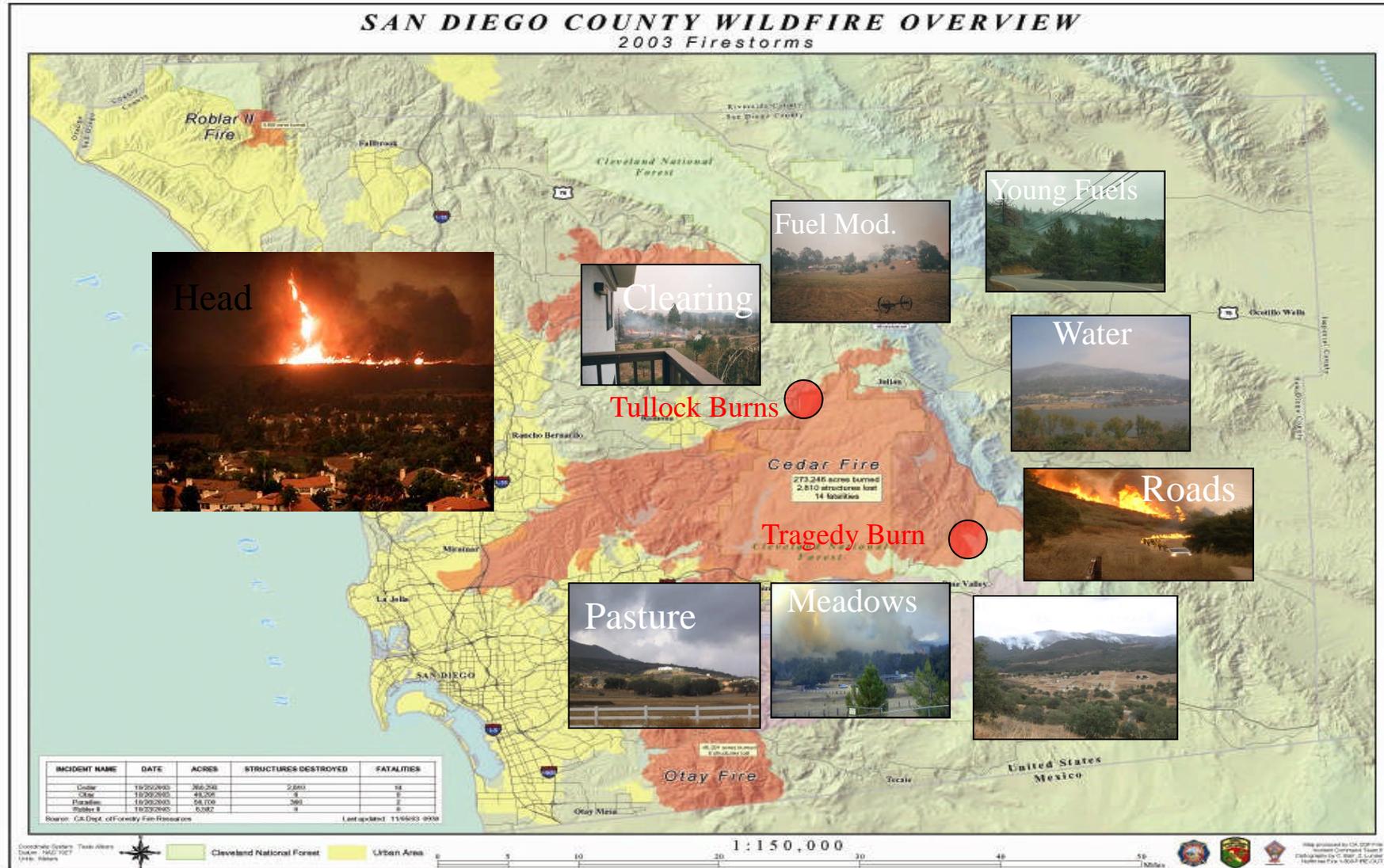
# Fuel Reduction



- Burns
- Recent Fire Scars
- Clearings/Pasture/Meadows
- Younger Fragmented Fuel Beds
- Greenbelts, Community Parks, Golf Courses, ...



# Where did the Cedar Fire Stop?



# **San Diego Fire Plan Strategies**

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graph TD; A[San Diego Fire Plan Strategies] --- B[Communities at Risk (Direct Actions)]; A --- C[Conflagration Mitigation (Large Scale VMP)];
```

**Communities at Risk**  
(Direct Actions)

**Conflagration  
Mitigation**  
(Large Scale VMP)

# **San Diego Fire Plan:**

## **Strategy I**

- **Vegetation Management**  
**Projects focused on protecting identified communities at risk.**
  - **Prescribed Fire**
  - **Chipping**
  - **Fuel Breaks**

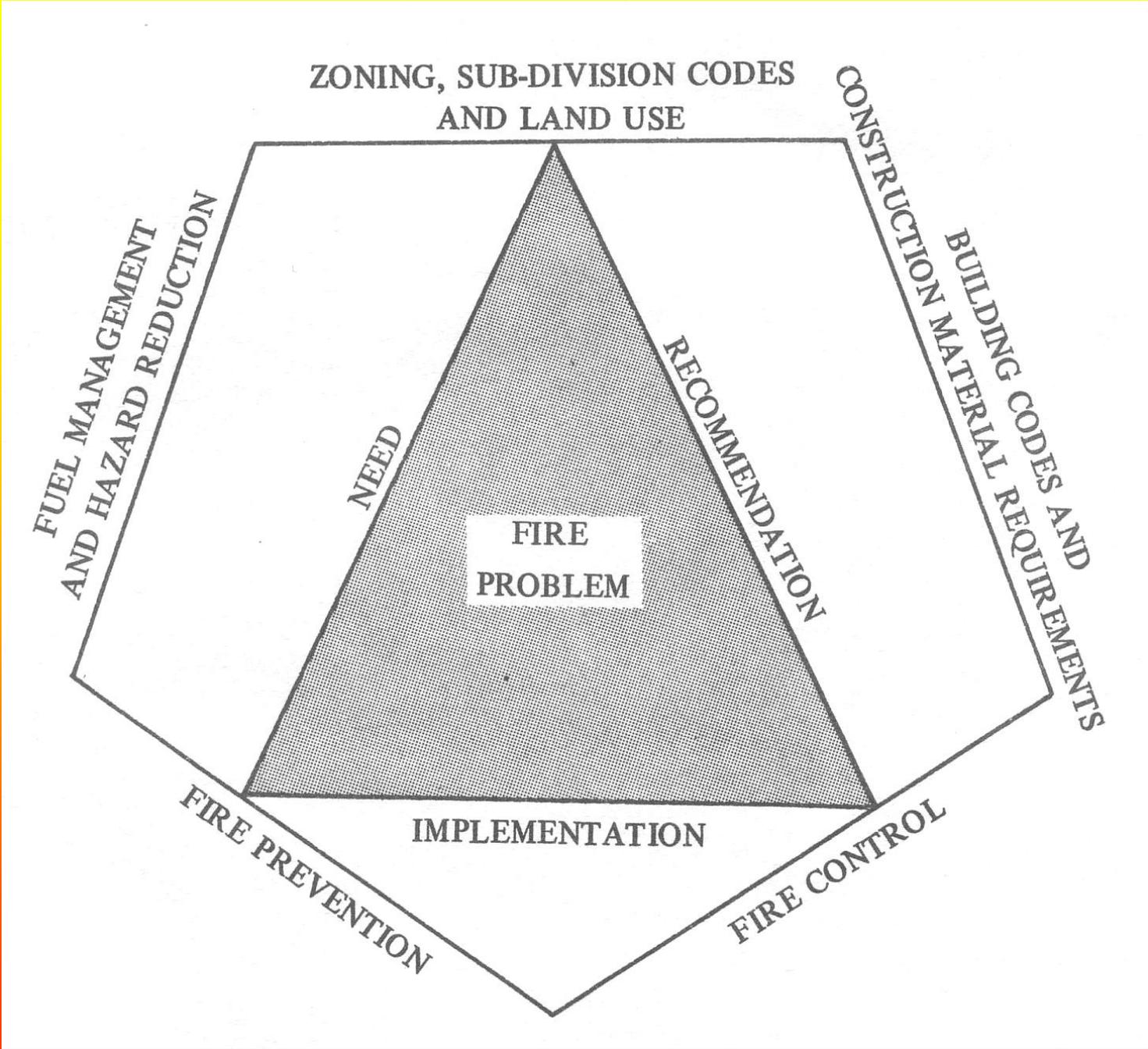
# **San Diego Fire Plan:**

## **Strategy II**

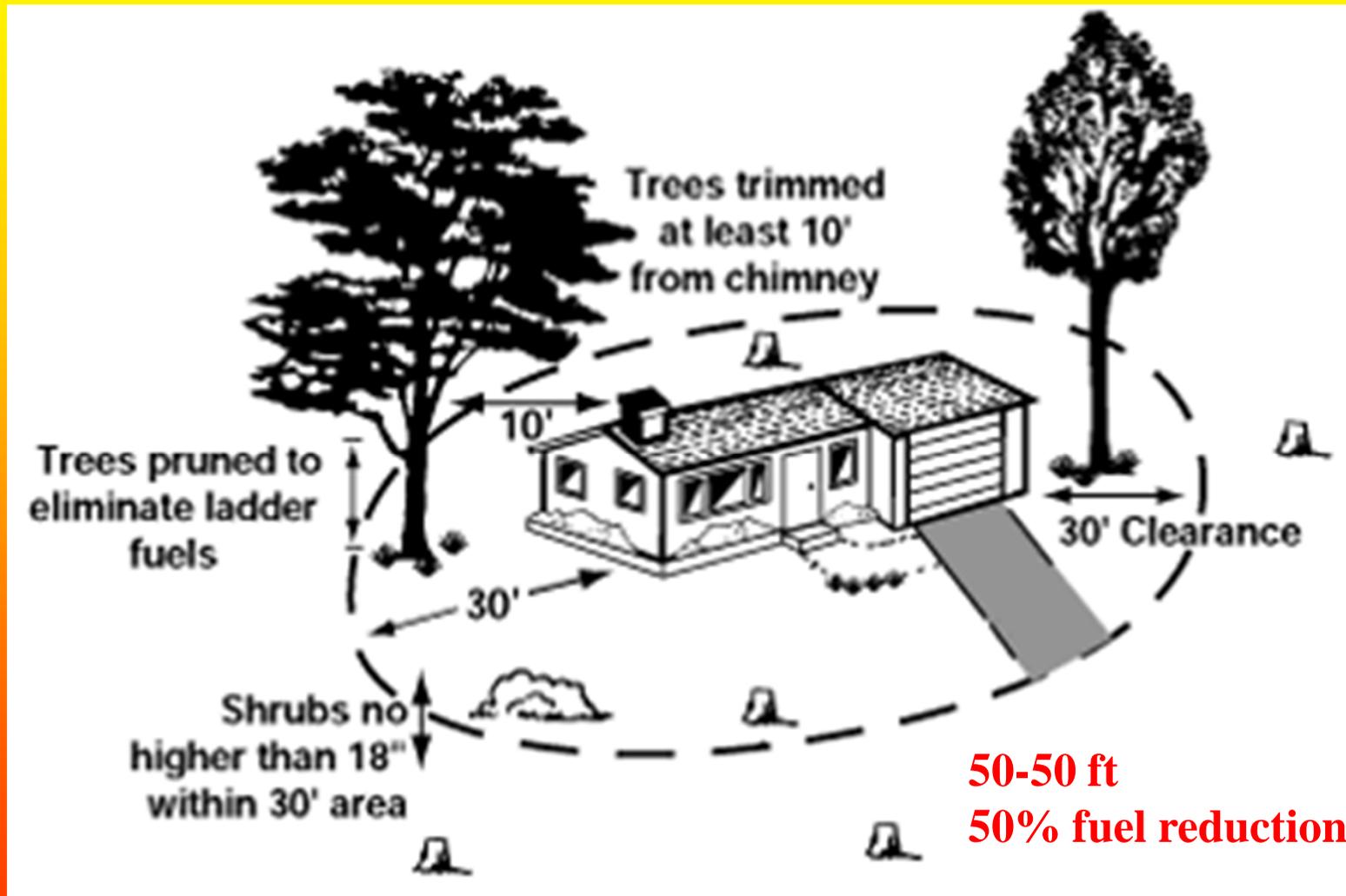
- **Vegetation Management Projects for the prevention of conflagration fires.**
  - Not specific to one community
  - Targeting fuels in strategic locations
  - Reduce fire intensity so firefighting can be effective

- **VMP used in strategic areas will lead to fire suppression successes in the future!**

# The Fire Problem



# Homeowner Responsibility



# **Land Use Regulation**

- **50 feet of defensible space clearance**
- **Add 50 feet of 50% fuel reduction in San Diego**
- **Wildland Vegetation Management is the responsibility of public agencies and large land owners.**
- **The VTPEIR is the tool that makes Wildland Vegetation Management possible.**

# Co-Existence With Wildfire



Takes a Systematic and Strategic Approach  
utilizing all of the tools available.

# Contact Information

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