



Smoke Management and the Modifications to the Implementation of Federal Wildland Fire Policy

Using the new business model to set the
framework for better partnership and improved air
quality

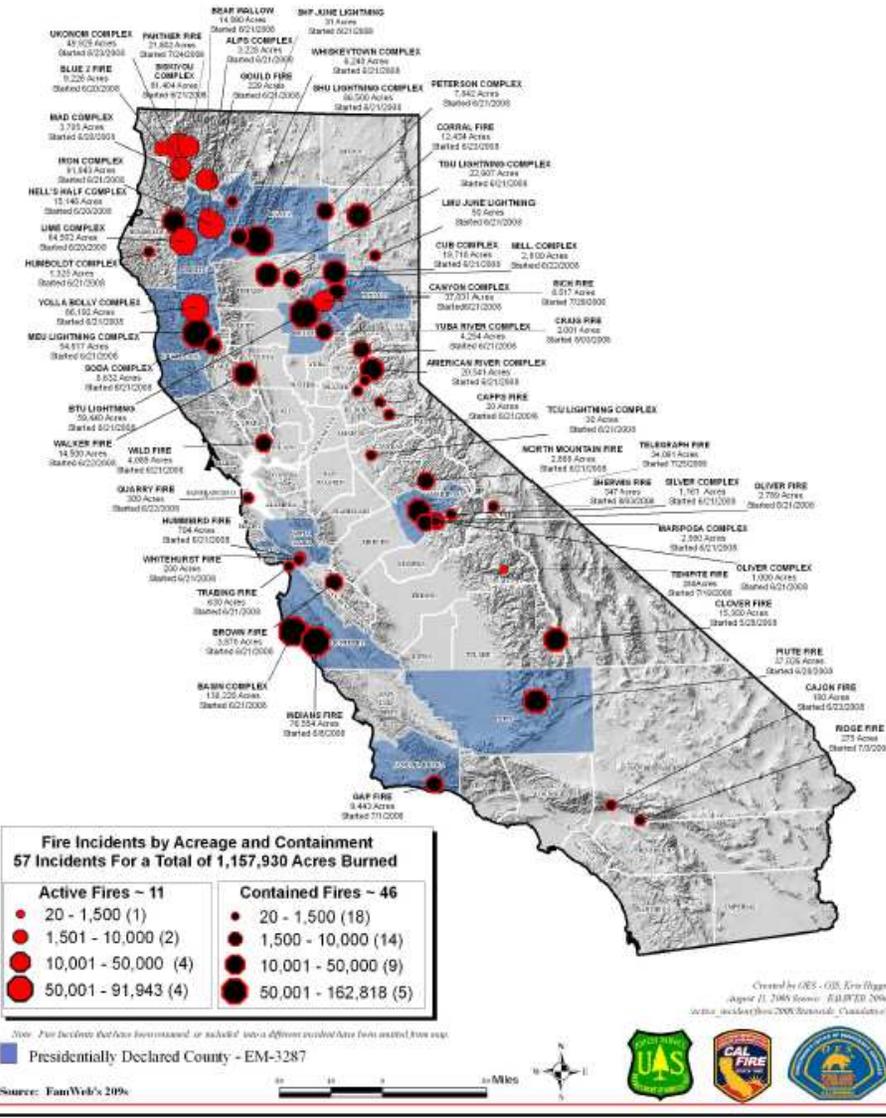
Objectives

1. Examine how modification to the implementation of Federal Wildland Fire Policy has affected decisions impacting air quality.
2. Identify 2 key conflicting elements between Title 17 and Federal Wildland Fire Policy.
3. Describe why effective smoke management is a key element in the success of any wildland fire management program.
4. Discuss the importance of including air quality concerns and air quality regulators in the wildland fire management decision making process.
5. Identify at least 4 methods that can be used to increase the ability of air quality regulators and wildland fire managers to work together.



CALIFORNIA WILDFIRES ~ FEMA EM - 3287-CA

Total Incidents from 6/22/08 - 8/11/08



2008

-- Abnormal ?

or

-- The New Norm ?



Lake Isabella

Piute Fire





What we know

- As a whole, untreated mixed-conifer and mid-elevation forests in the Sierra Nevada have more fuel now than at anytime in the known past.
- More fuels mean more smoke per acre than anytime in the known past.



1909



1989

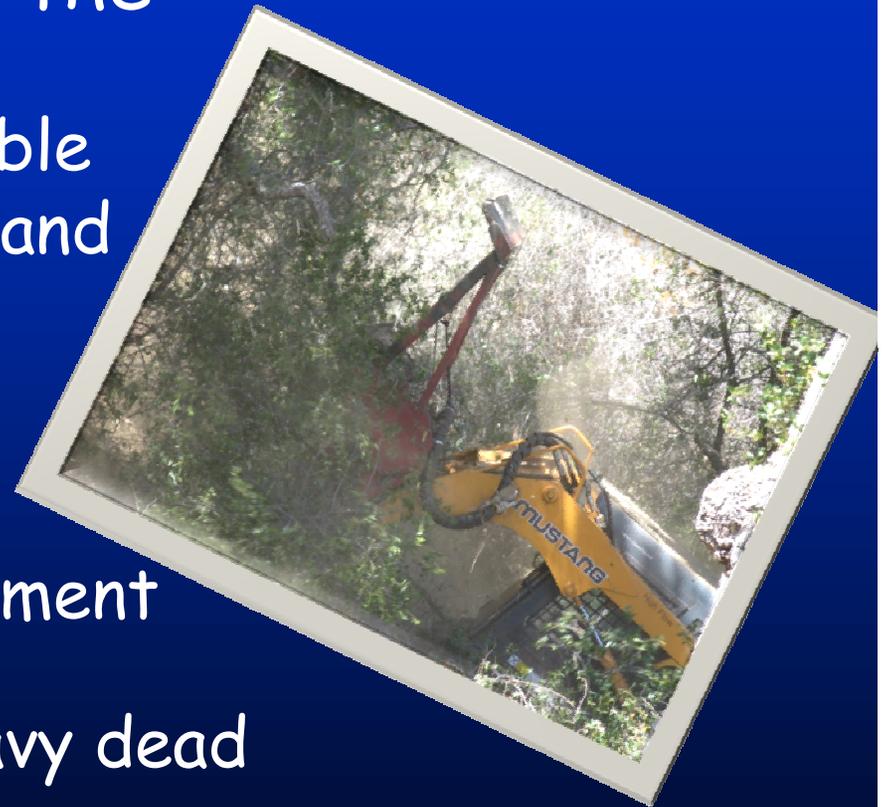
What we know

- Without aggressive treatment, the situation will continue to get worse.
 - Forest health will continue decline
 - Wildfires will likely become larger and more difficult to control
 - Some forests could be more prone to type conversion
 - Research is suggesting that some forests could become more flammable
 - Forests will lose more and more of their ability to sequester carbon



What we know

- Mechanical treatment is part of the solution, but isn't the end all solution
 - Some areas are inaccessible
 - Does not deal with litter and duff
 - Can create additional environmental impacts
 - Can be very expensive, depending upon the treatment objectives and methods
 - Doesn't deal with the heavy dead and down fuels



What we know

- Prescribed fire is part of the solution, but isn't the end all solution
 - Some areas cannot be broken into reasonably sized burn units
 - Risk of escape
 - Prescriptions can be fickle
 - Can be very expensive, depending upon the treatment objectives and methods



What we know

- It's going to harder before it gets easier
- It's going to get worse before it gets better
- Federal budgets are likely to continue to decline
 - Reduced opportunity for Rx Fire
 - Increased competition for more limited resources for wildfires



1909



1948



1968



1979



1989



The Five Horsemen Of the Fire Management Apocalypse

- Invasive Species
- Global Climate Change
- Wildland Urban Interface
- Loss of Natural Fire Regime
- Air Quality

Safety

“Firefighter and public safety is the first priority in every fire management activity.”

--Guidance for Implementation of Federal wildland Fire Management Policy – February 2009

193 Deaths in the last 10 years

Life and death and fire

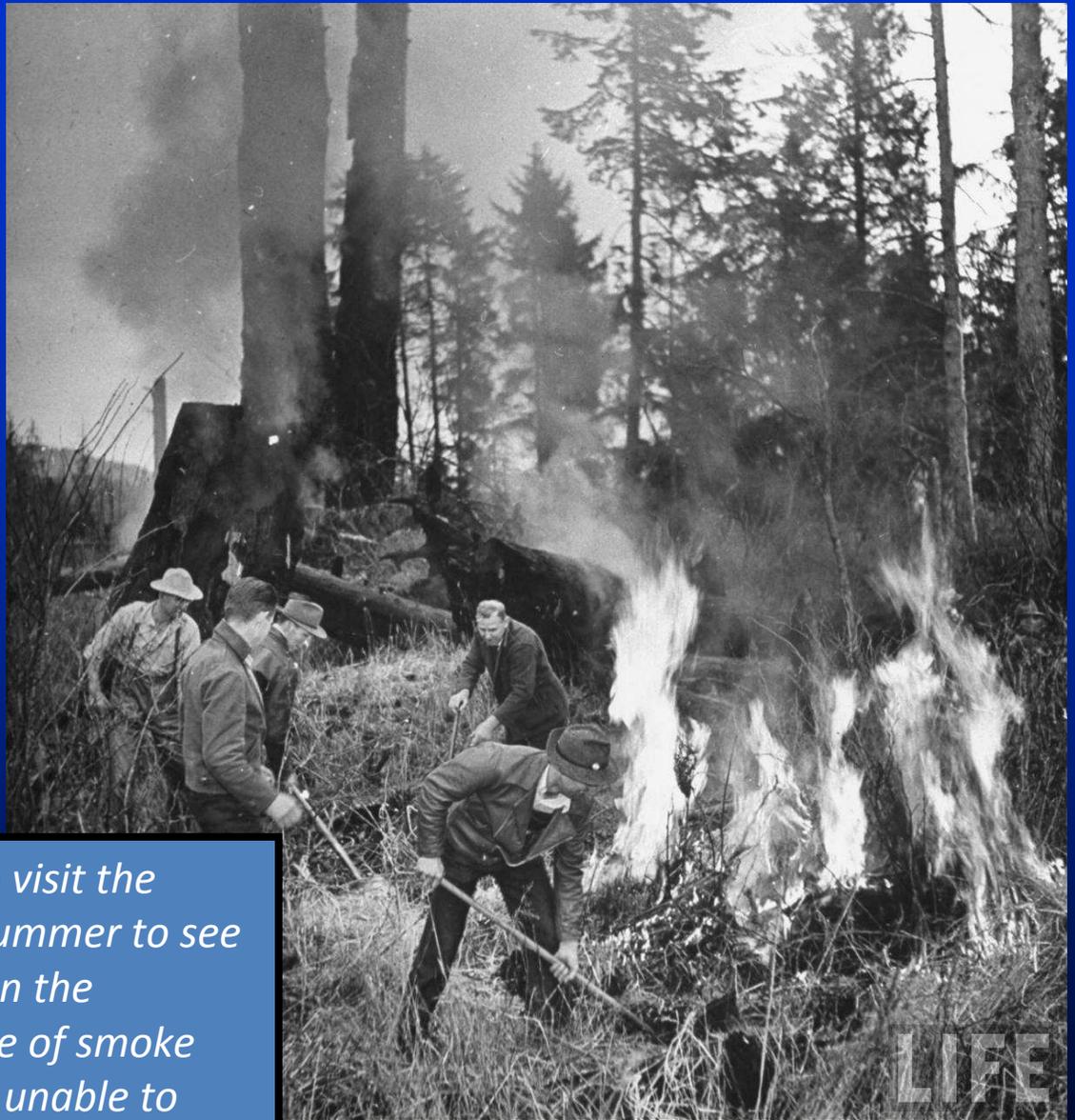
Thirteen men were on a Sikorsky S-61 when it crashed Tuesday in Northern California. Nine of them — college students, a newlywed and a man who took care of his disabled mother, among them — died in one of the worst air crashes involving firefighters in U.S. history. Each man's story is woven into Oregon's tight-knit fire community.

Those who died

 Matt Hammer Grants Pass 23	 Shawn Patrick Blazer Medford 30
 Scott Charlson Phoenix 25	 Edrik Gomez Ashland 19
 Bryan Rich Central Point 29	 Roark Schwanenberg Lostine 54
 David Steele Ashland 19	 Jim Ramage Redding 63
 Steven Renno Cave Junction 21	



So how
did we
get to
this
point?



“Of the hundreds of persons who visit the Pacific slope in California every summer to see the mountains, few see more than the immediate foreground and a haze of smoke which even the strongest glass is unable to penetrate.” C. H. Merriam 1898

Evolving Process
Fire control
Fire management
Recent Policy

Reviews

1989

1995

2001

2008



Fire Policy

- Why review the policy
 - Interagency cooperation and communications
 - Escalating fire suppression costs
 - Confusion about policy implementation (AMR)
 - Issues where policy implementation conflicted with policy



1. Firefighter and public safety is the first priority in every fire management activity.
2. The role of wildland fire as an essential ecological process and natural agent of change will be incorporated into the planning process.
3. Fire Management Plans, programs, and activities will support land and resource management plans and their implementation.

Guiding Principles



4. Sound risk management is the foundation for all fire management activities.
5. Fire management programs and activities must be economically viable, based on values to be protected, costs, and land and resource management objectives.

**Guiding
Principles**



6. Fire Management Plans¹ are based on the best available science.

7. Fire Management Plans¹ incorporate public health and environmental quality considerations.

¹Fire Management Plans is a generic term referring to unit level strategic plans for wildland fire and known by the names of Land, Resource and Fire Management Plans

**Guiding
Principles**



8. Federal, **state**, tribal, and **local** interagency coordination and **cooperation are essential**.
9. Standardization of policies and procedures among federal agencies is an ongoing objective.

**Guiding
Principles**



Major Management Implications



- Wildland fire management agencies will use common standards for all aspects of their fire management programs to facilitate effective collaboration among cooperating agencies.
- 2. Agencies and bureaus will review, update, and develop agreements that clarify the jurisdictional inter-relationships and define the roles and responsibilities among local, state, tribal and federal fire protection entities.

Major Management Implications



- Responses to wildland fire will be coordinated across levels of government regardless of the jurisdiction at the ignition source.

Fire management planning will be intergovernmental in scope and developed on a landscape scale

Major Management Implications



- Wildland fire is a general term describing any non-structure fire that occurs in the wildland. Wildland fires are categorized into two distinct types:
 - a. Wildfires - Unplanned ignitions or prescribed fires that are declared wildfires
 - b. Prescribed Fires - Planned ignitions.

Major Management Implications



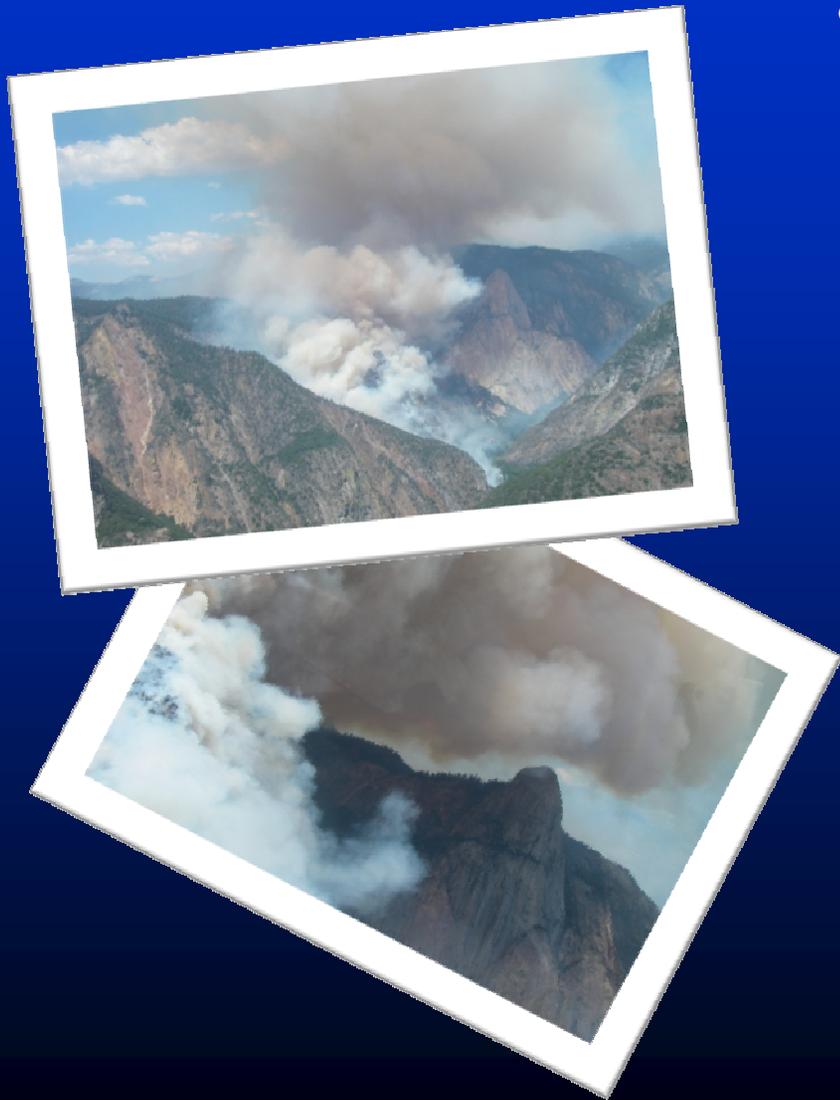
- A wildland fire may be concurrently managed for one or more objectives and objectives can change as the fire spreads across the landscape. Objectives are affected by changes in fuels, weather, topography; varying social understanding and tolerance; and involvement of other governmental jurisdictions having different missions and objectives.

Major Management Implications



- Initial action on human-caused wildfire will be to suppress the fire at the lowest cost with the fewest negative consequences with respect to firefighter and public safety.

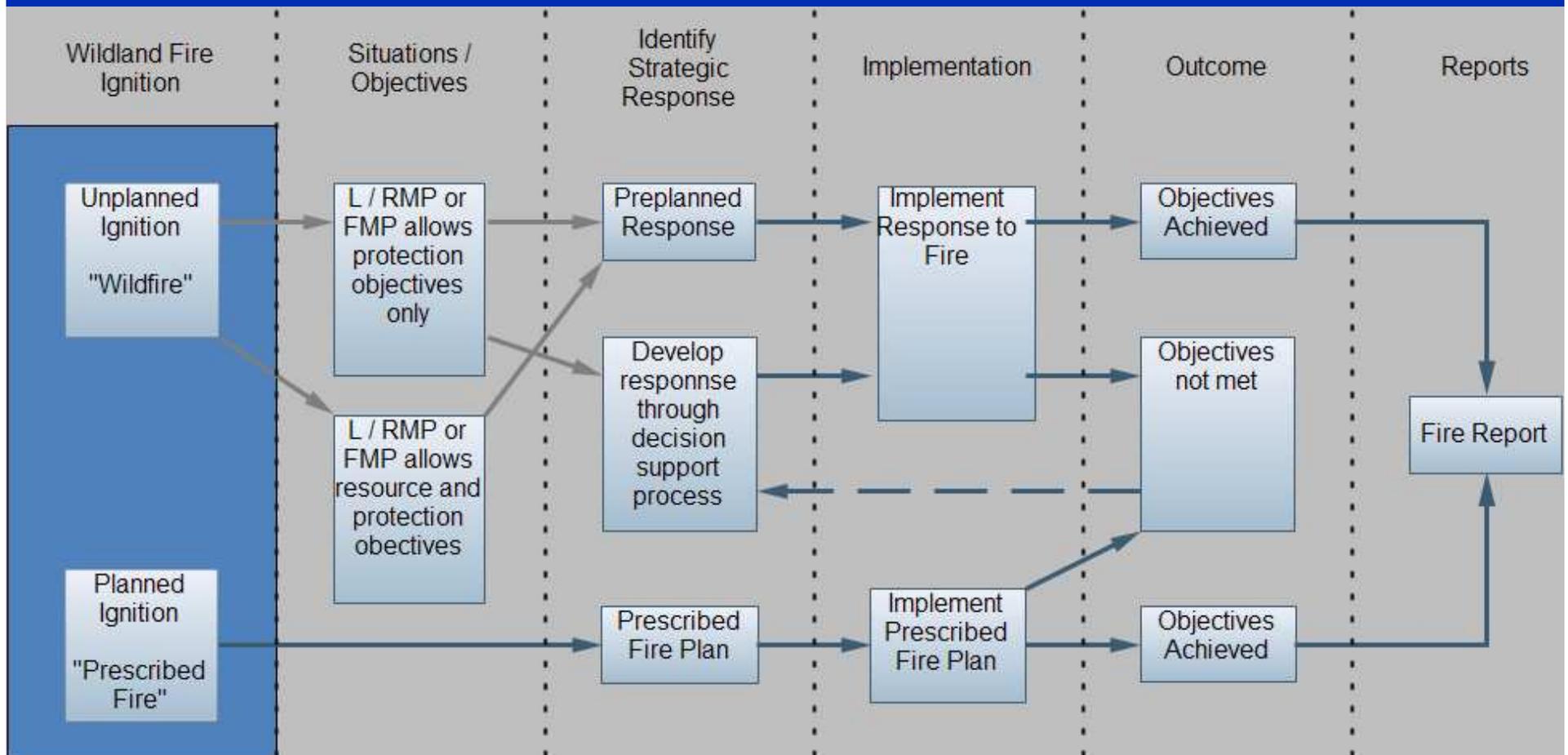
Major Management Implications



- Managers will use a decision support process to guide and document wildfire management decisions. The process will provide situational assessment, analyze hazards and risk, define implementation actions, and document decisions and rationale for those decisions.



Wildland Fire Policy Implementation



Laws and Policy

Title 17 Definitions

- “Wildfire” – means any unwanted wildland fire

Federal Policy Definitions

- “Wildfire” – means unplanned ignition of a wildland fire



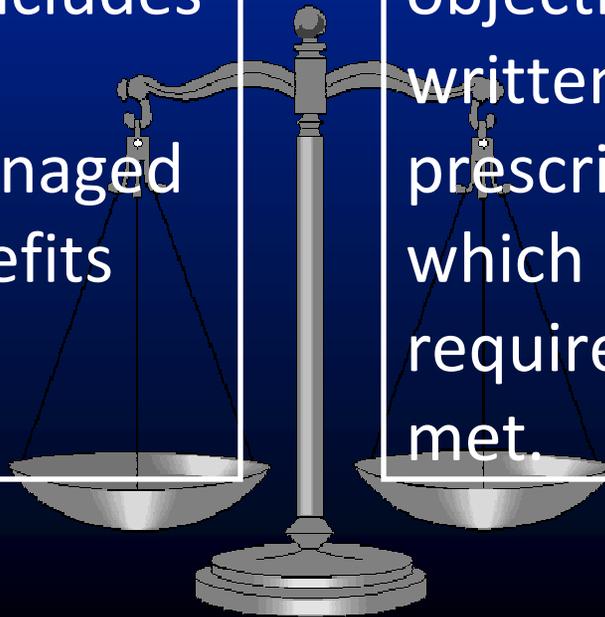
Laws and Policy

Title 17 Definitions

- “Prescribed Fire” – means any fire ignited by management actions to meet specific objectives, and includes naturally-ignited wildland fires managed for resource benefits

Federal Policy Definitions

- “Prescribed Fire” – is a wildland fire originating from a planned ignition to meet specific objectives identified in a written, approved, prescribed fire plan for which NEPA requirements have been met.





What does right look like ?

Let's set some given's

- We have the responsibility to manage our smoke. The public expects it and the public requires it.



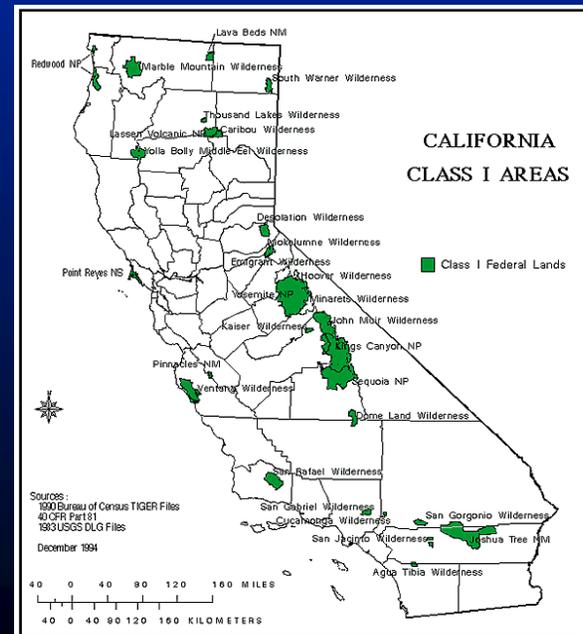
Let's set some given's

- We have a legal and regulatory obligation to manage our smoke.



Let's set some given's

- Many LMAs are responsible for managing federally designated Class I Airsheds. For many National Parks, Refuges, and National Forests, clean air is identified as a threatened resource.



Let's identify some facts

- Planned ignitions
 - are just that: planned. Rx burns should have a smoke management plan that identifies "how", "where", and "when".
 - The situation is controlled and we have the choice on whether or not the ignition occurs.
 - Environmental parameters are set
 - Smoke management and CARB / APCD approval an integral part of the go / no-go process. (PFIRS / PIFA)

Let's identify some variables

- Unplanned ignitions
 - are just that: unplanned.
 - Our ability to control the fire spatially, temporally, or conditionally is limited and dependent upon the situation.
 - We had no choice in "when", "where", "why", and "how" the fire started, but we have a responsibility to deal with it.
 - Smoke Management is still an integral part of the planning process that must be considered at all stages of the fire.

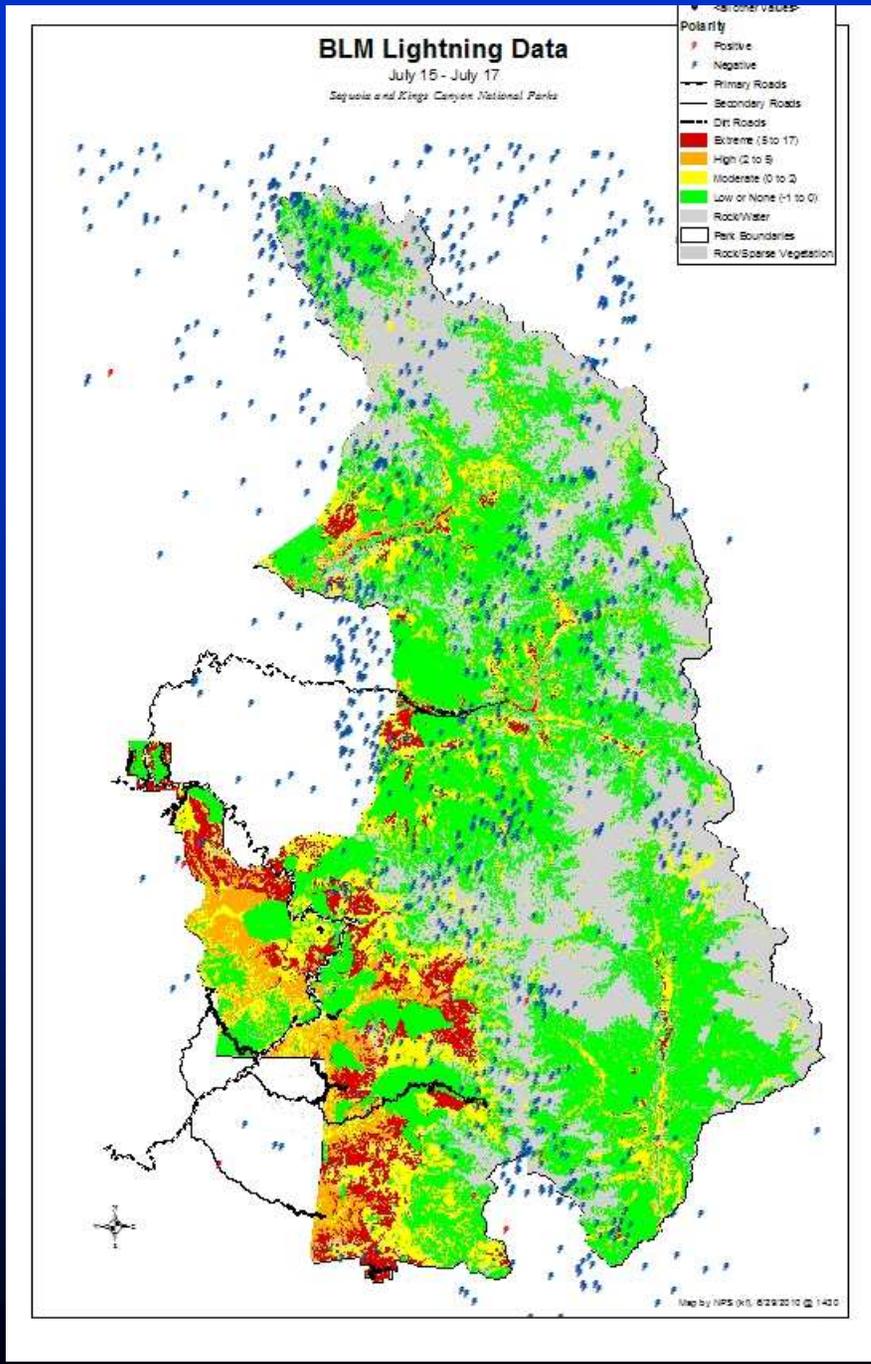
Let's identify some variables

- Unplanned ignitions
 - Air quality is a critical component of the decision making process, but it is not the **ONLY** component
 - Firefighter Safety - failure of a fire manager to provide for firefighter safety can be considered outside the scope of employment and can lead to criminal prosecution.
 - Protection of Private Property
 - Protection of Natural and Cultural Resources
 - Cost Containment
 - Long - term benefits / consequences

Let's identify some variables

- Unplanned ignitions
 - No single objective, other than Firefighter safety, can be considered unilaterally.
 - All risks and benefits must be considered in context with one another and a course of action developed that best meets the overall Strategic Objectives and Management Requirements for the fire.
 - Success is an assessment of how well all of the objectives are accomplished, not just a single independent objective.

OK, Let's Go to Work!



July 14

BLM Lightning Data

July 15 - July 17

Sequoia and Kings Canyon National Parks

ALMS201007180913

• *all other values*

Polarity

• Positive

• Negative

• Extreme (5 to 17)

• High (2 to 4)

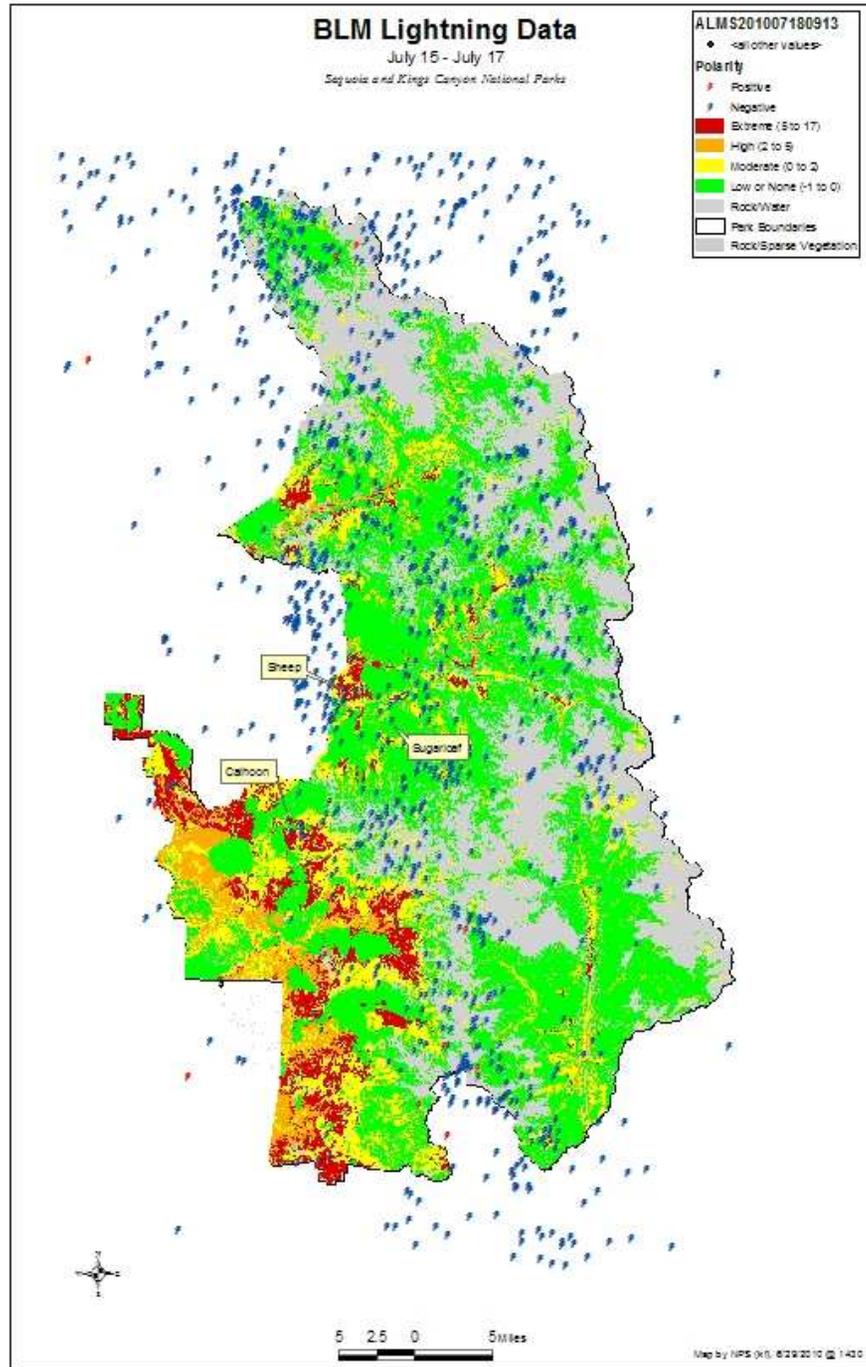
• Moderate (0 to 2)

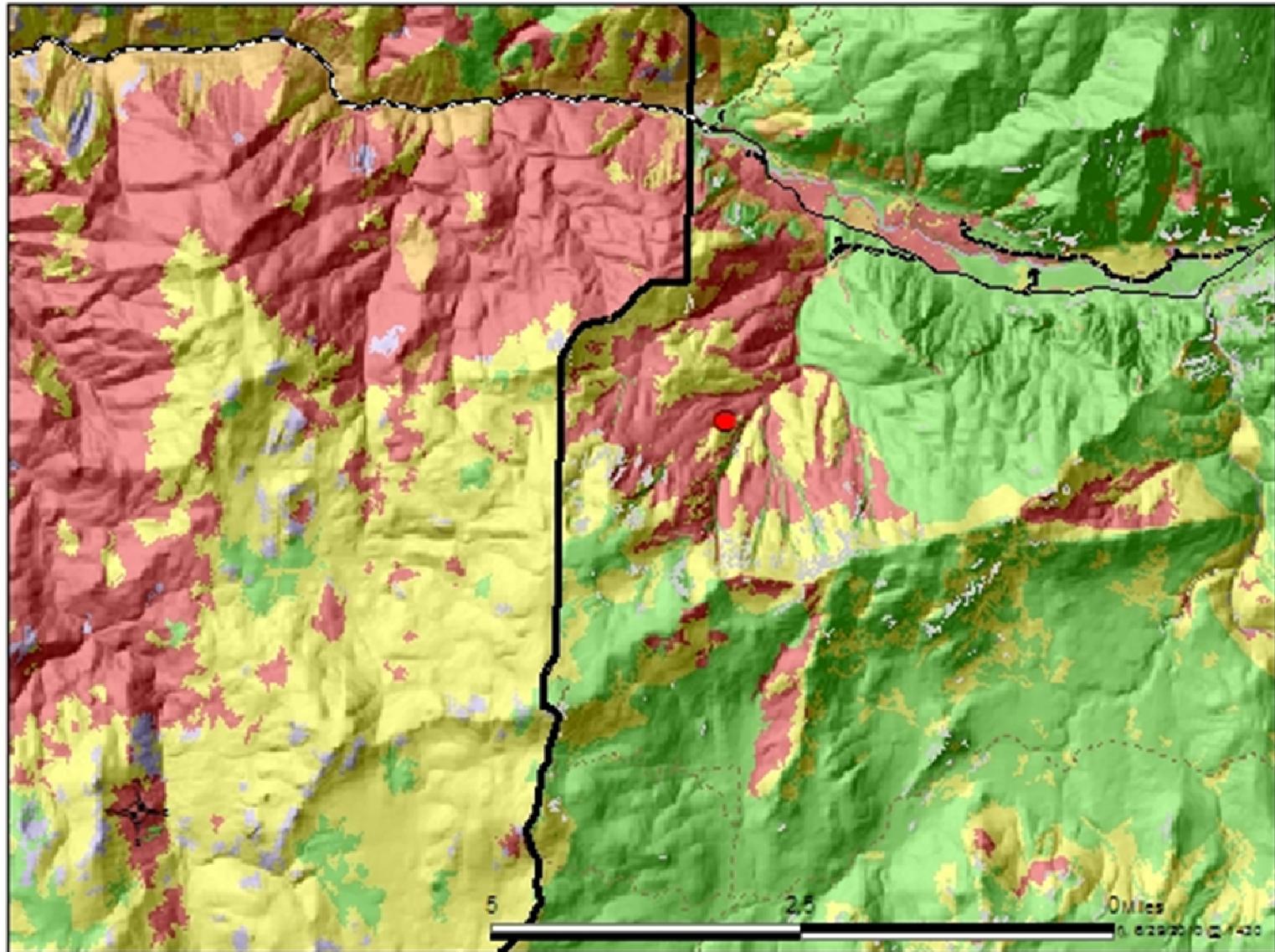
• Low or None (-1 to 0)

• Rock/Water

• Park Boundaries

• Rock/Sparse Vegetation



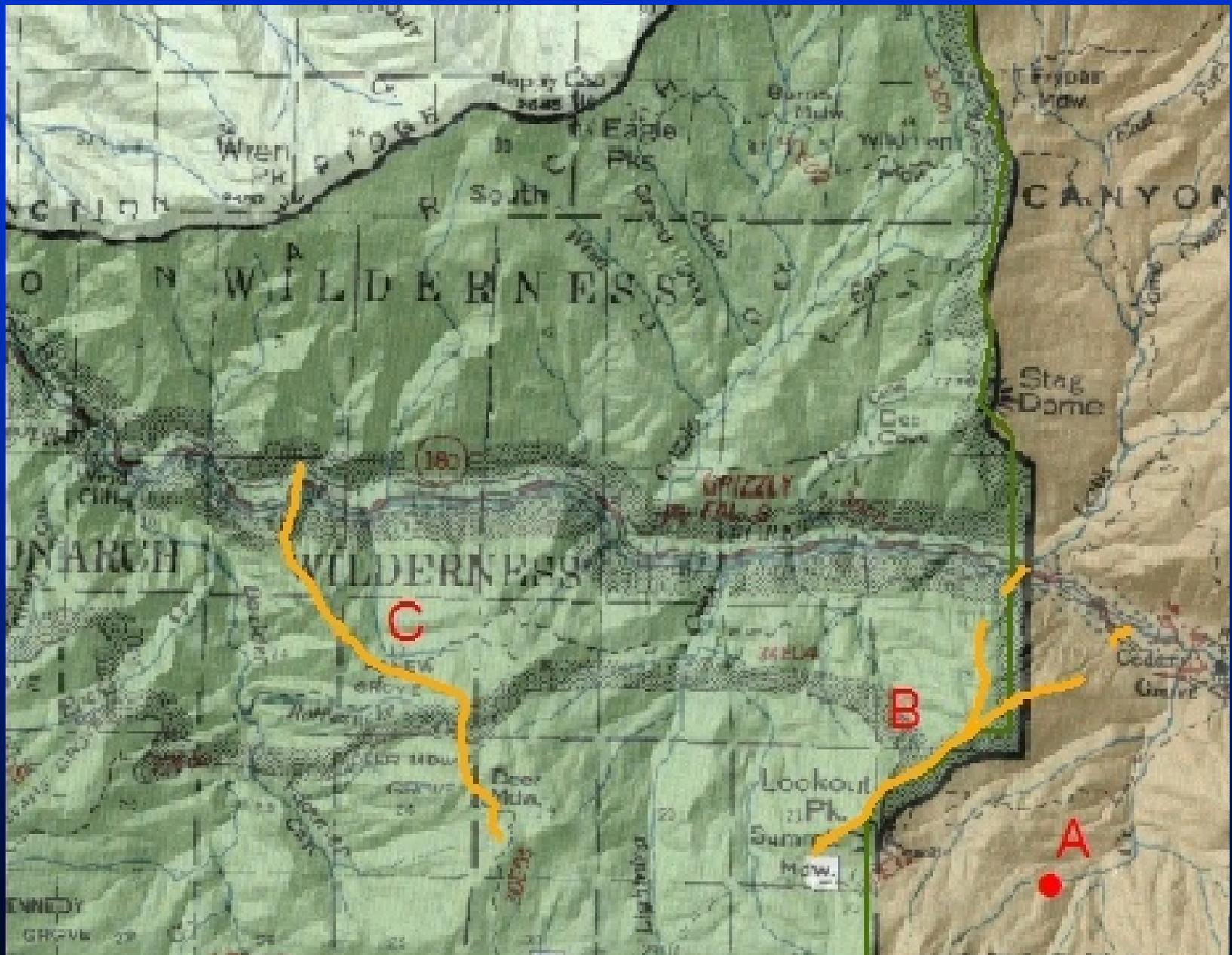




Issues

- Sheep Creek watershed
- Powerline corridor to Cedar Grove
- Cedar Grove infrastructure
- Impact on visitors and employees
- Both historic and pre-historic cultural sites
- Interagency jurisdictions
- Inaccessibility
- Restoring fire upon the landscape
- Wilderness values and requirements
- Wildland firefighter safety
- Potential for large fire growth
- Public information and education
- Costs
- Air Quality, potential for significant impacts





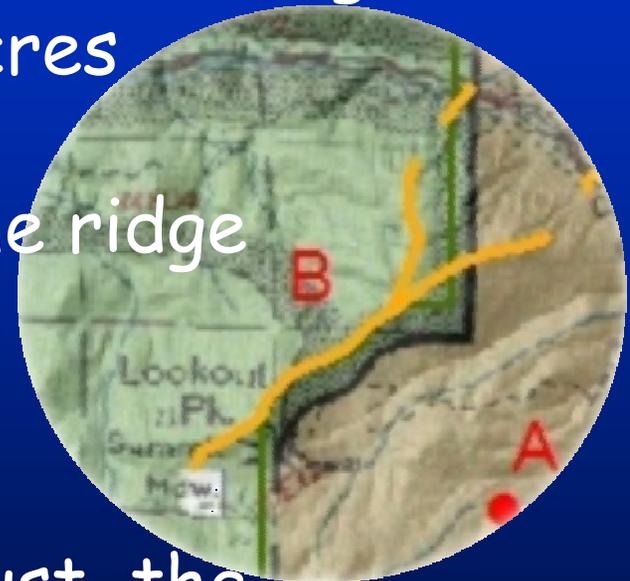
Option 1 - Direct Attack

- 60 / 40 odds on fire growing
- Tough walk in, risk of injuries
- Fails to take advantage of wet year
- Fails to take advantage of slow fire season
- Not in agreement with Fire Management Plan
- No fuels treated
- Least amount of smoke
- "If not now - when?"



Plan B

- Restores fire to the Sheep Creek drainage
- Total fire size around 3,000 acres
- Some smoke impact probable
- Better emergency access on the ridge
- Cultural sites to protect
- Power line to protect
- Private property to protect
- If fire reaches the line in August, the probability of success low, additional growth likely
- Interagency planning necessary



Plan C - maybe we won't get there

- Restores fire to Sheep Creek and Lightning Creek drainages
- Total fire size around 9,000 acres
- Smoke impact probable
- Good opportunities for emergency access
- Cultural sites to protect
- Power line to protect
- Private property to protect
- Long duration fire with lots of uncertainty
- Continual interagency planning necessary



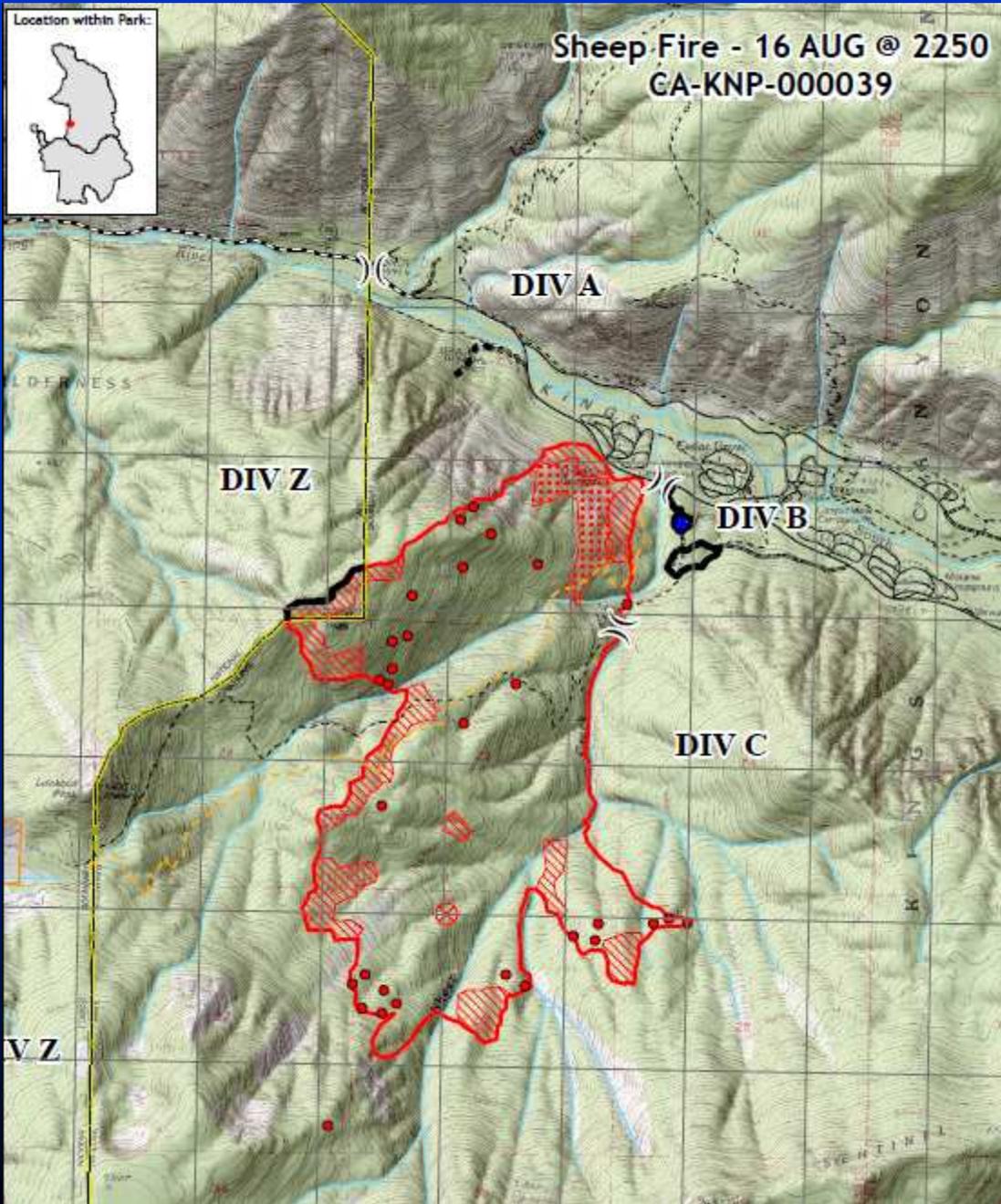
The Decision

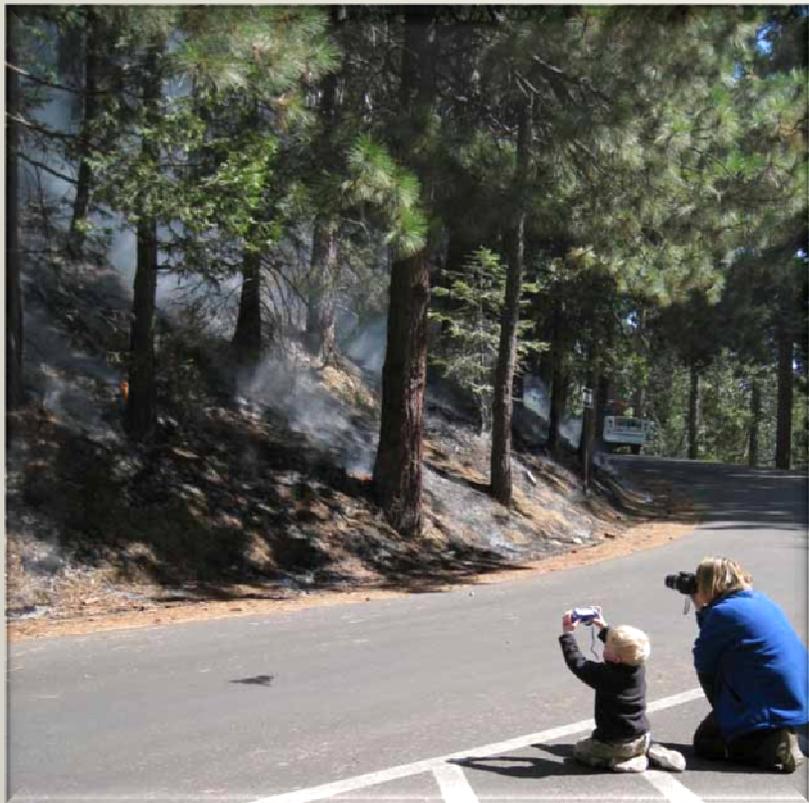
- Allow fire to progress toward park / forest boundary.
- Hold or stop fire at boundary if fire reaches area before Labor Day (Plan B line) AND such actions are cost effective, tactically sound, and safe
- Utilize firing techniques when appropriate to control fire effects and to mitigate smoke impacts.
- Stop the fire east of Boulder Creek (Plan C) if tactically sound, safe, costs commensurate with values at risk.

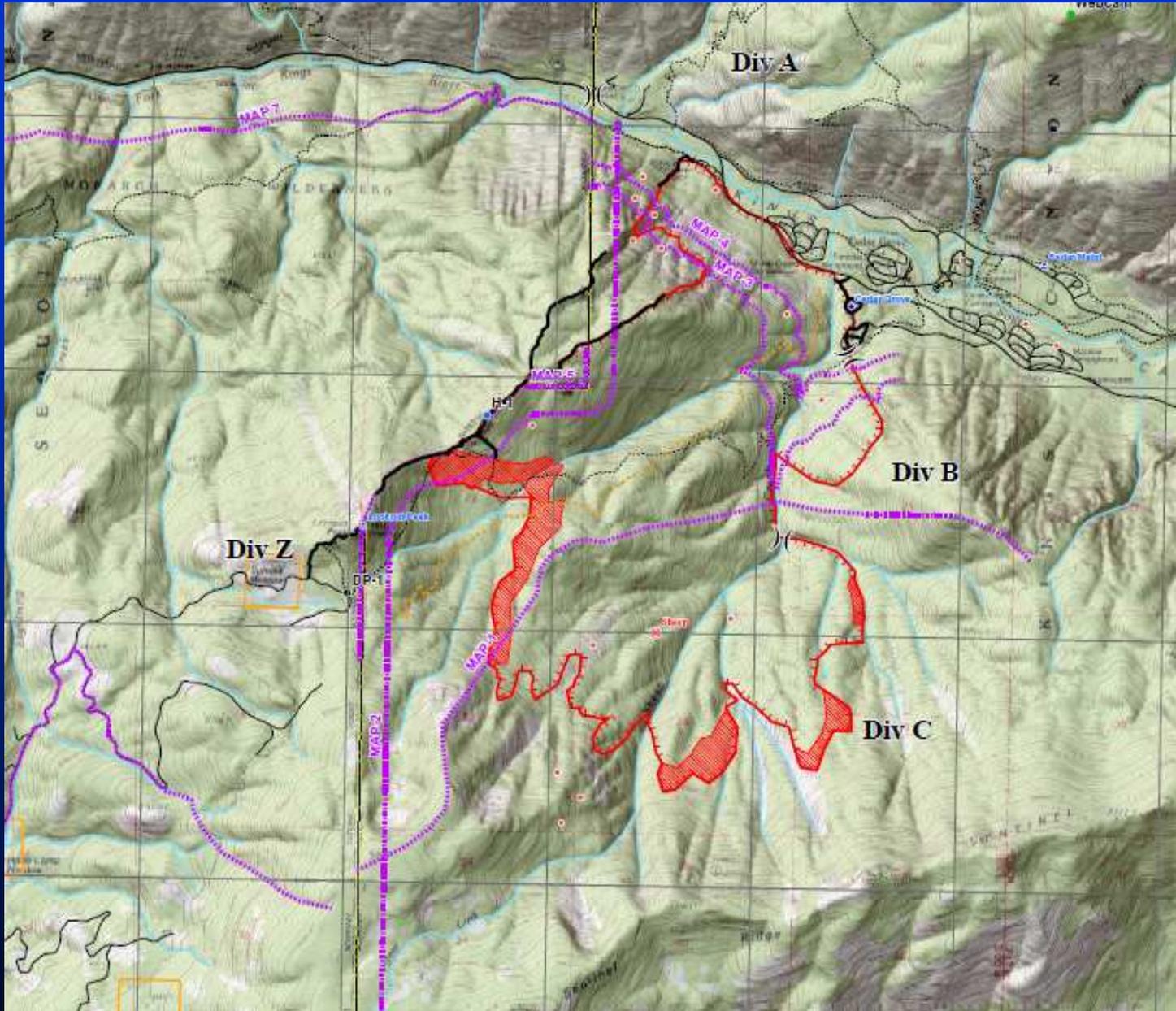
The Decision

- Coordinate actions with the San Joaquin Valley Unified Air Pollution Control District and, to the extent possible, include air district concerns in the planning process.
- Monitor smoke emissions
- Inform and educate the public on all fire management decisions and smoke impacts
- Protect all values at risk, including private property, wilderness, and cultural sites

So What Happened ?



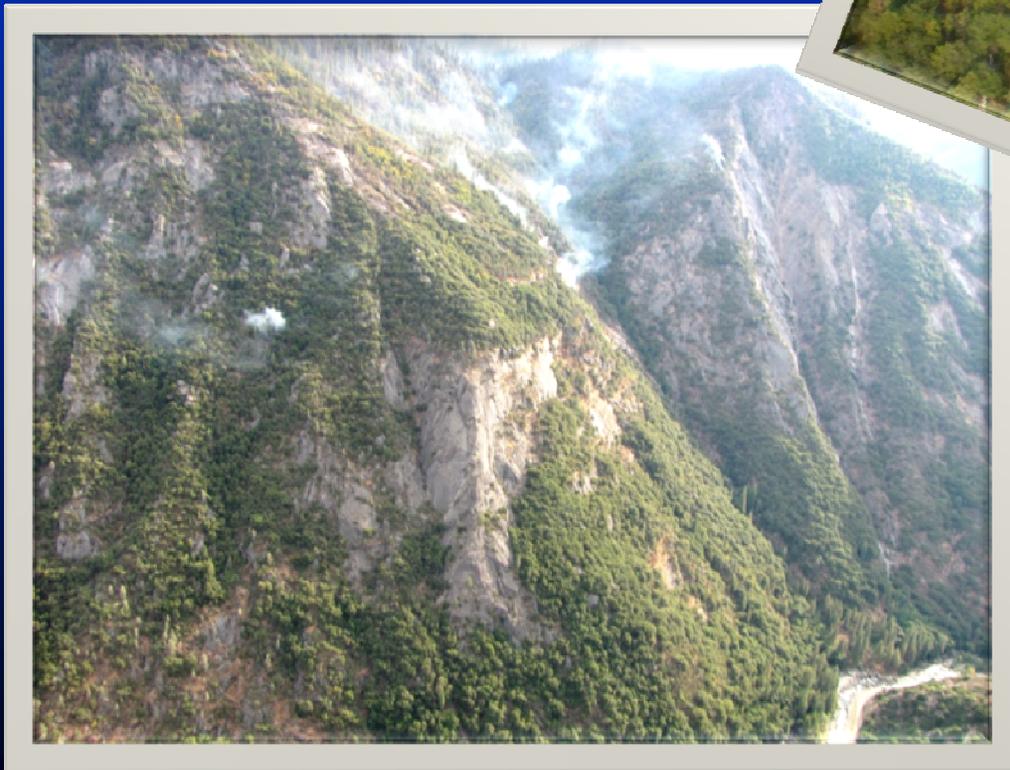


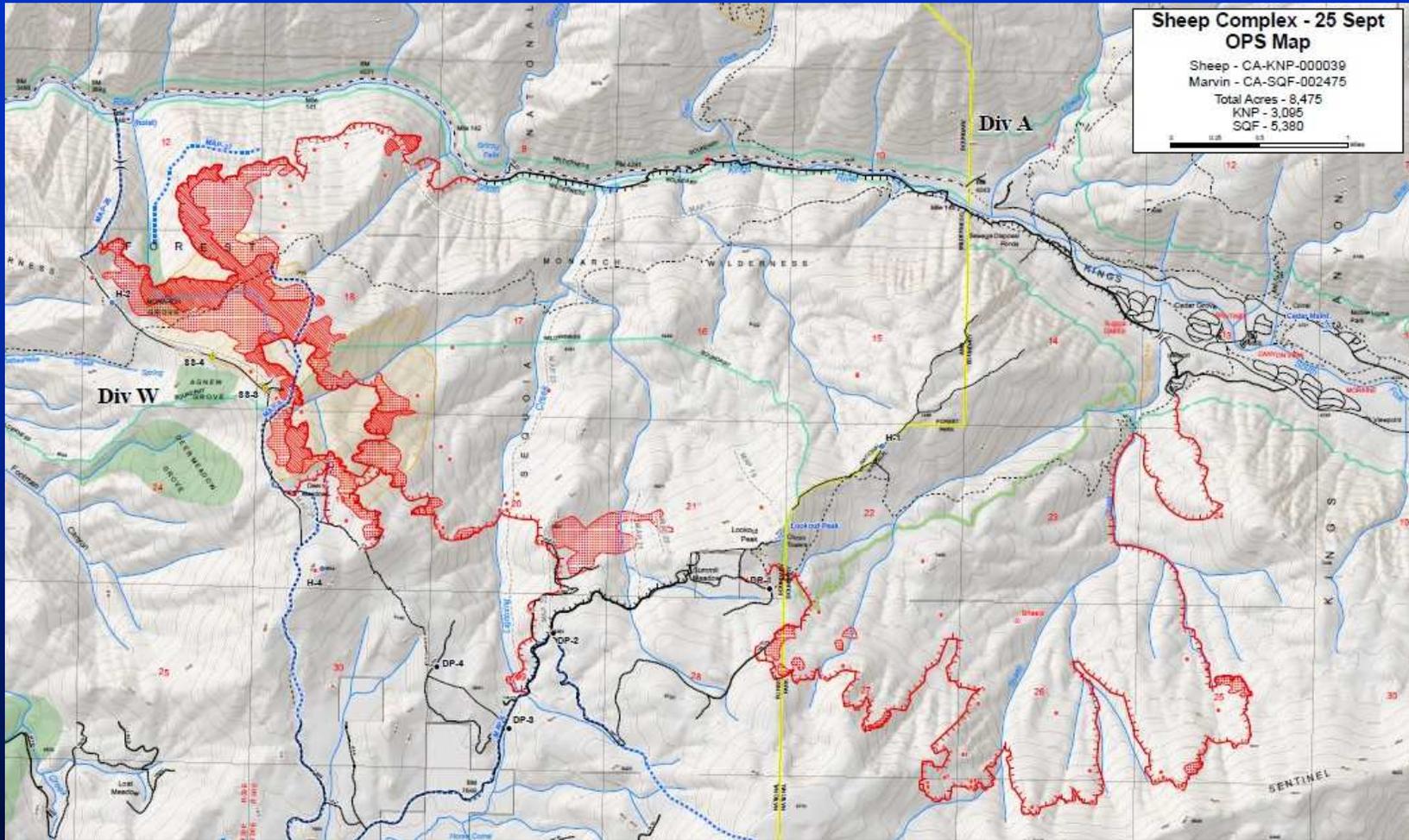


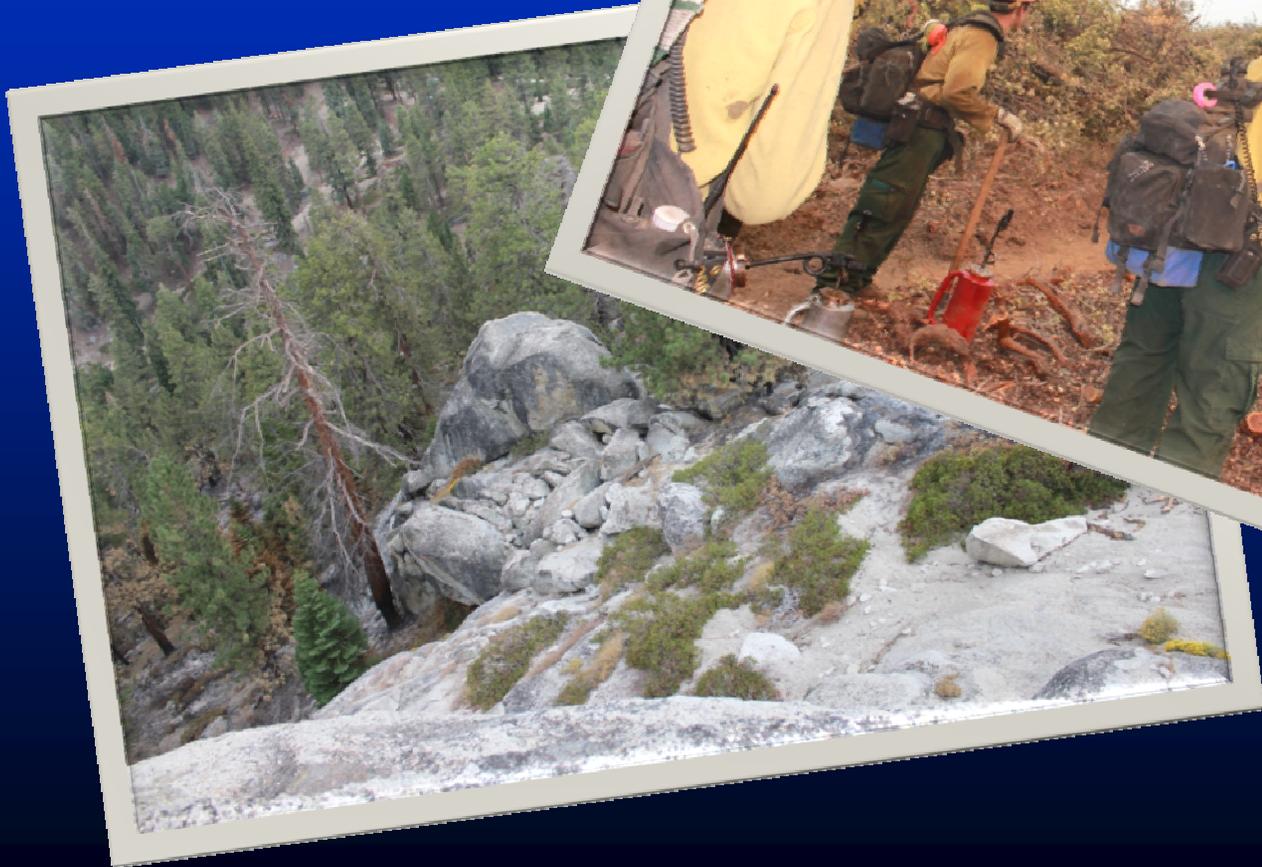
8/22/2010



It's a Wildfire,
Stupid!

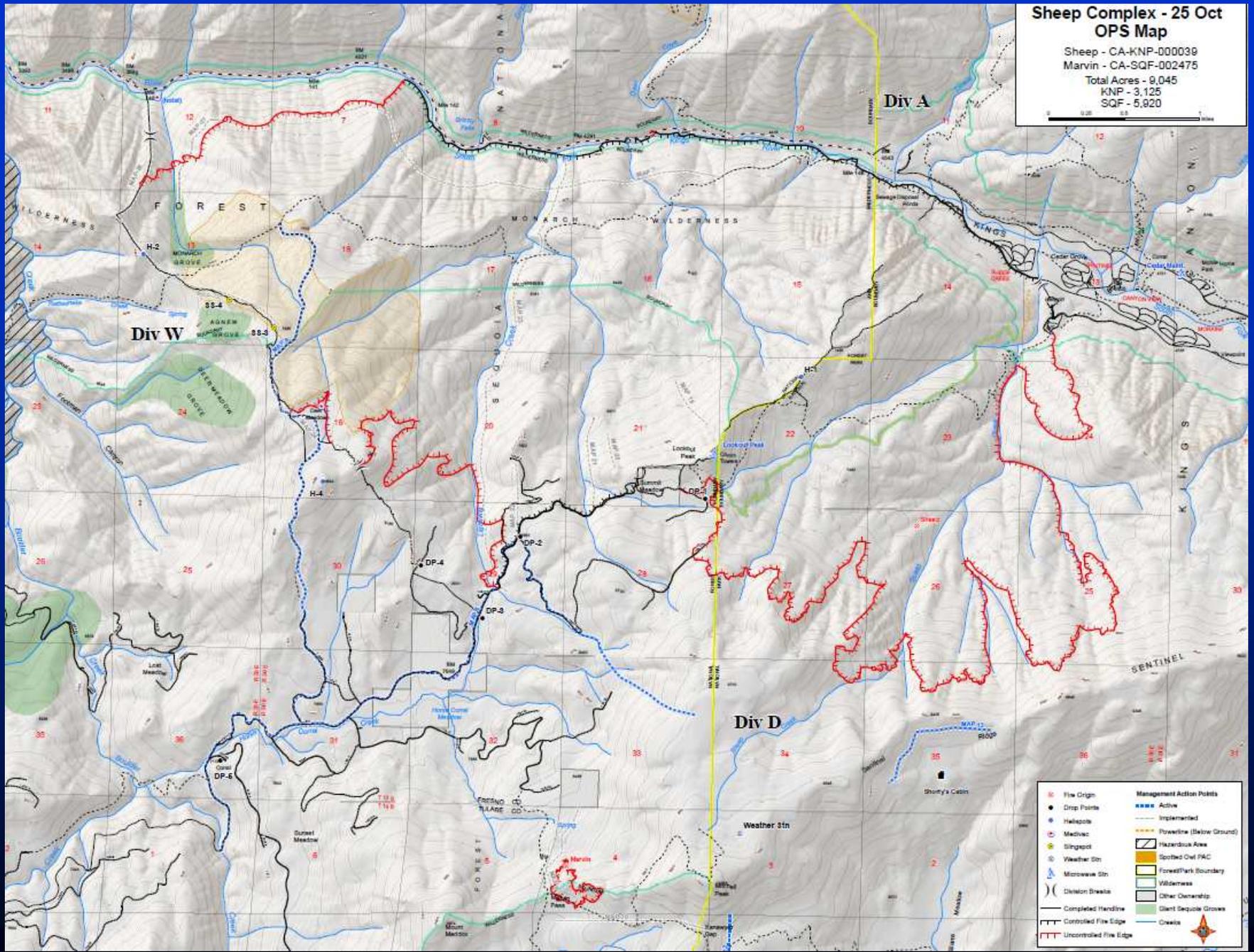






Sheep Complex - 25 Oct OPS Map

Sheep - CA-KNP-000039
 Marvin - CA-SQF-002475
 Total Acres - 9,045
 KNP - 3,125
 SQF - 5,920



- | | |
|--------------------------|----------------------------|
| ● Fire Origin | ● Management Action Points |
| ● Drop Points | ● Active |
| ● Helicopter | ● Implemented |
| ● Medic | ● Powerline (Below Ground) |
| ● Slingpack | ● Hazardous Area |
| ● Weather Stn | ● Spotted Owl PAC |
| ● Microwave Stn | ● Forest/Park Boundary |
| ● Division Breaks | ● Wilderness |
| ● Completed Handline | ● Other Ownership |
| ● Controlled Fire Edge | ● Giant Sequoia Groves |
| ● Uncontrolled Fire Edge | ● Creek |

The Score Card

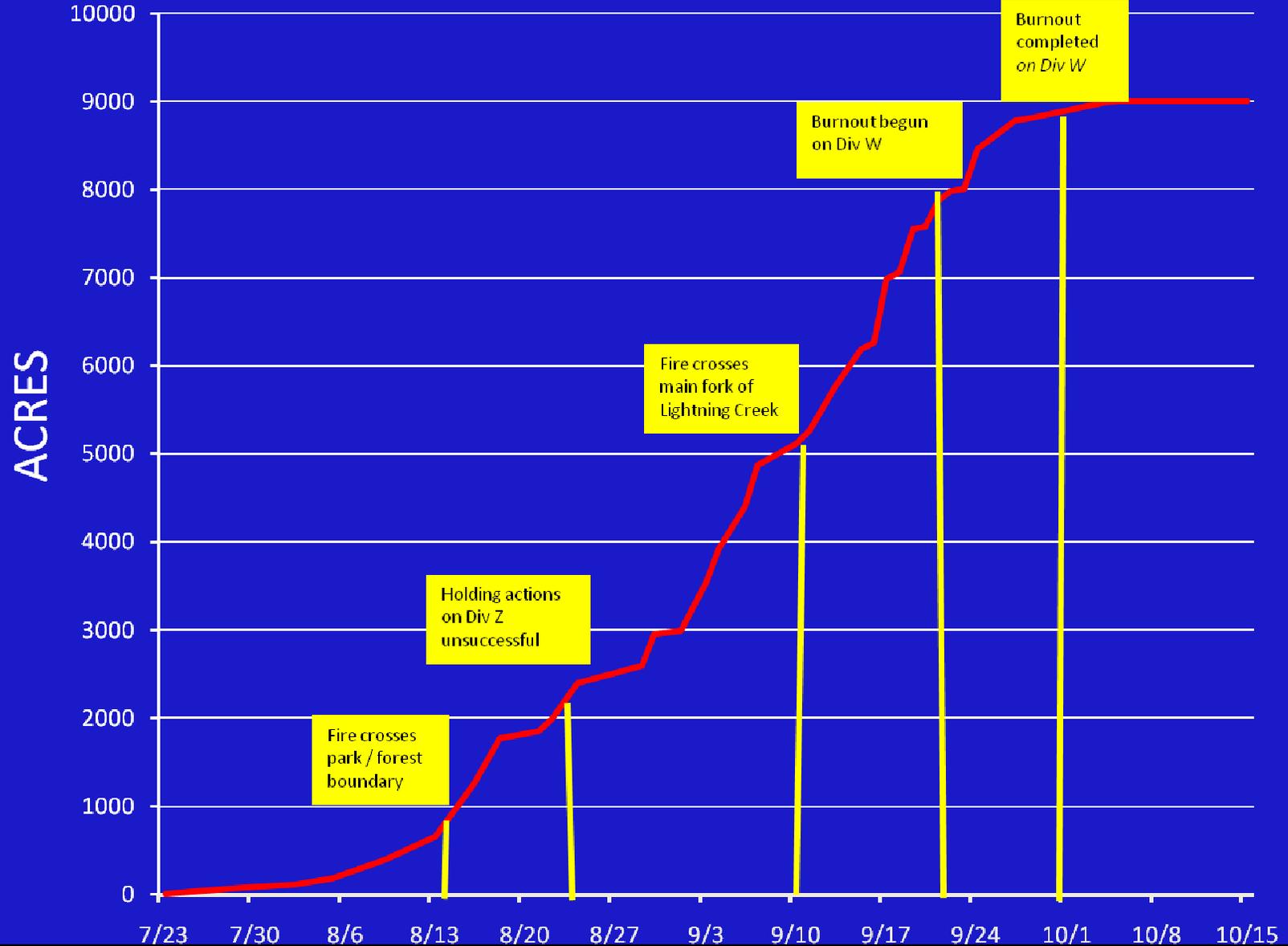
- Fire restored to 9,045 acres
- No significant injuries
- Infrastructure in Cedar Grove intact
- No impact to the power line
- All cultural sites protected
- Wilderness values maintained
- Private property protected
- 1.9 million dollars expended
- Significant smoke impacts to local targets
- Smoke impacts to the Great Basin and portions of the central valley

Sheep Complex - 25 Oct OPS Map

Sheep - CA-KNP-000039
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Sheep Fire Growth



Keys to Success

- Openness and Honesty
- Communication
- Trust
- Accepting Differences
- Shared Goals and Visions
- Common Values
- Saying Thank You

So, Can we be successful?



COMPROMISE

LET'S AGREE TO RESPECT EACH OTHER'S VIEWS,
NO MATTER HOW WRONG YOURS MAY BE.

www.despair.com

We have no choice.....



Objectives

1. Examine the Modifications to the Implementation of Federal Wildland Fire Policy.
2. Identify 2 key conflicting elements between Title 17 and Federal Wildland Fire Policy.
3. Describe why effective smoke management is a key element in the success of any wildland fire management program.
4. Discuss the importance of including air quality concerns and air quality regulators in the wildland fire management decision making process.
5. Identify at least 4 methods that can be used to increase the ability of air quality regulators and wildland fire managers to work together.

A photograph of a forest fire. The scene is filled with thick, orange-brown smoke that obscures the background. In the foreground, there are several large, dark tree trunks, some of which appear charred. The ground is covered in dry leaves and twigs, with small fires burning in several places. The overall atmosphere is one of a controlled burn or a wildfire in progress. The text "Questions?" is overlaid in the center of the image in a white, sans-serif font.

Questions ?