

**Bluff WFU-Lessons Learned**  
**Lassen Volcanic National Park**  
**July 4-October 30, 2004**

**Mike Lewelling**  
**Fire Management Officer**  
**Lassen Volcanic National Park**

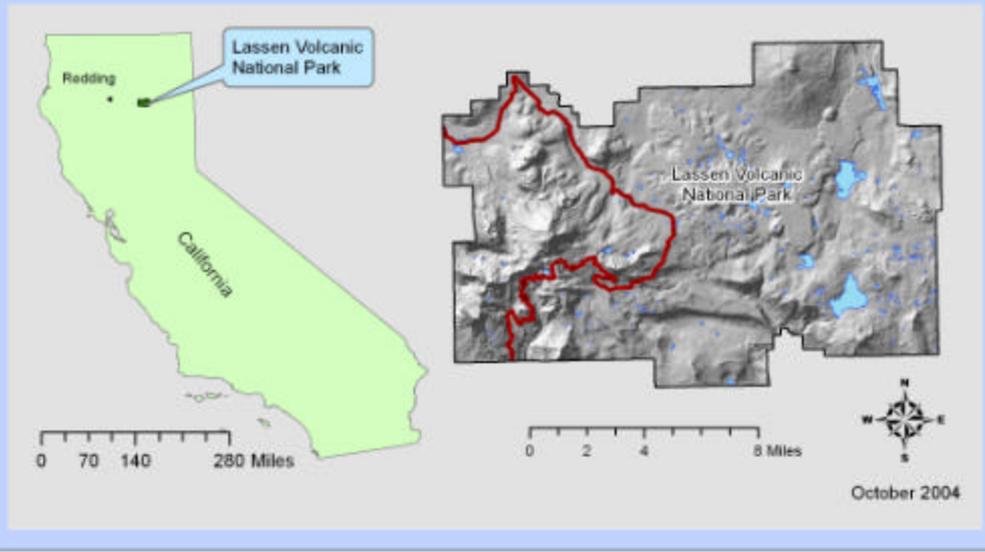
**John Waldrop**  
**Senior Air Pollution Inspector**  
**Shasta CO, AQMD**

# Lessons Learned

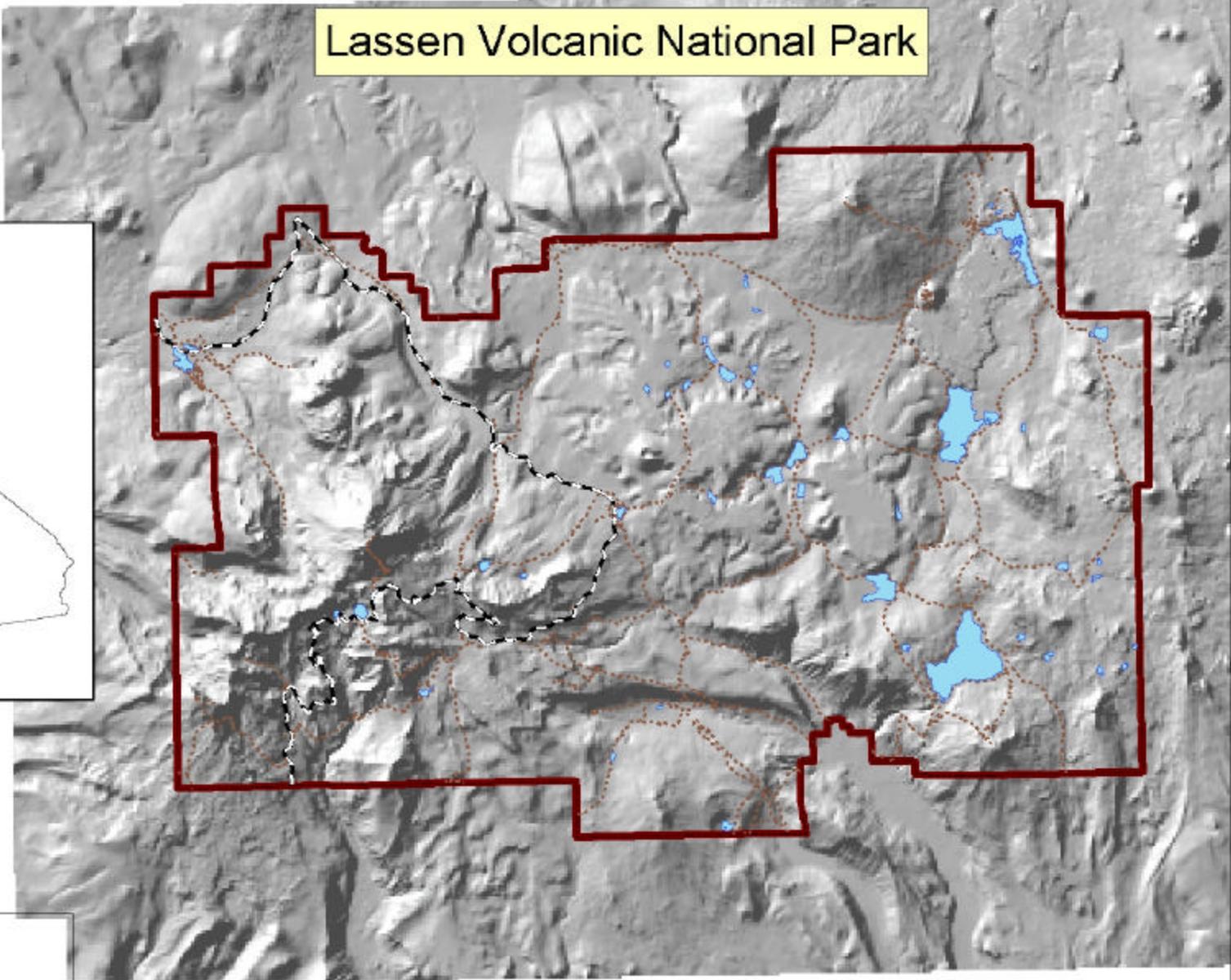
- Summary of the Bluff Fire
- Lessons Learned
- Benefits
- Questions



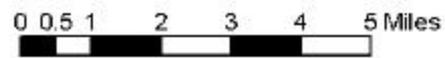
Figure 1.1: Vicinity Map



# Lassen Volcanic National Park



- Trails
- - - - Major Roads
- █ LAVO Park Boundary
- █ Lakes

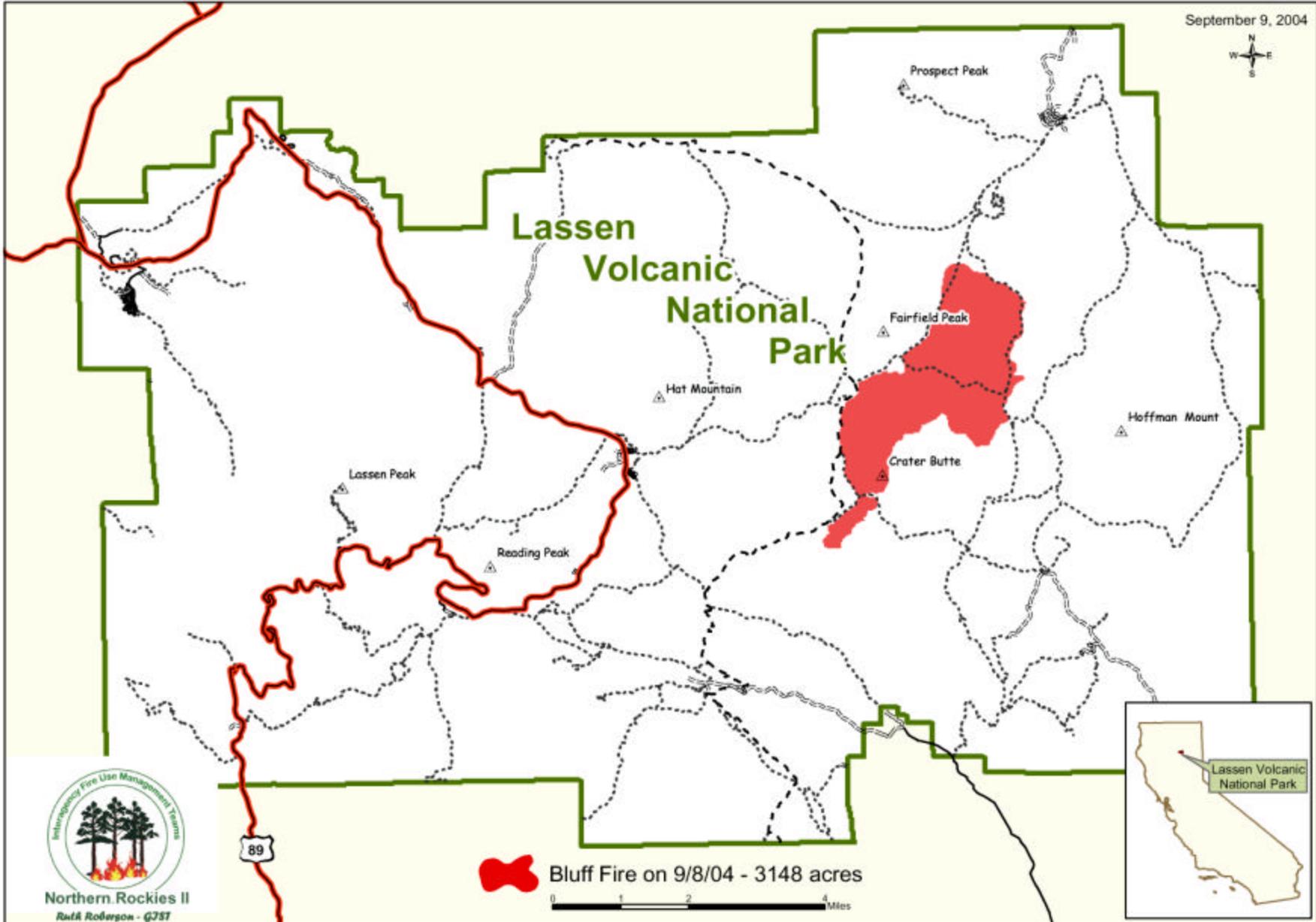




September 9, 2004



# Lassen Volcanic National Park



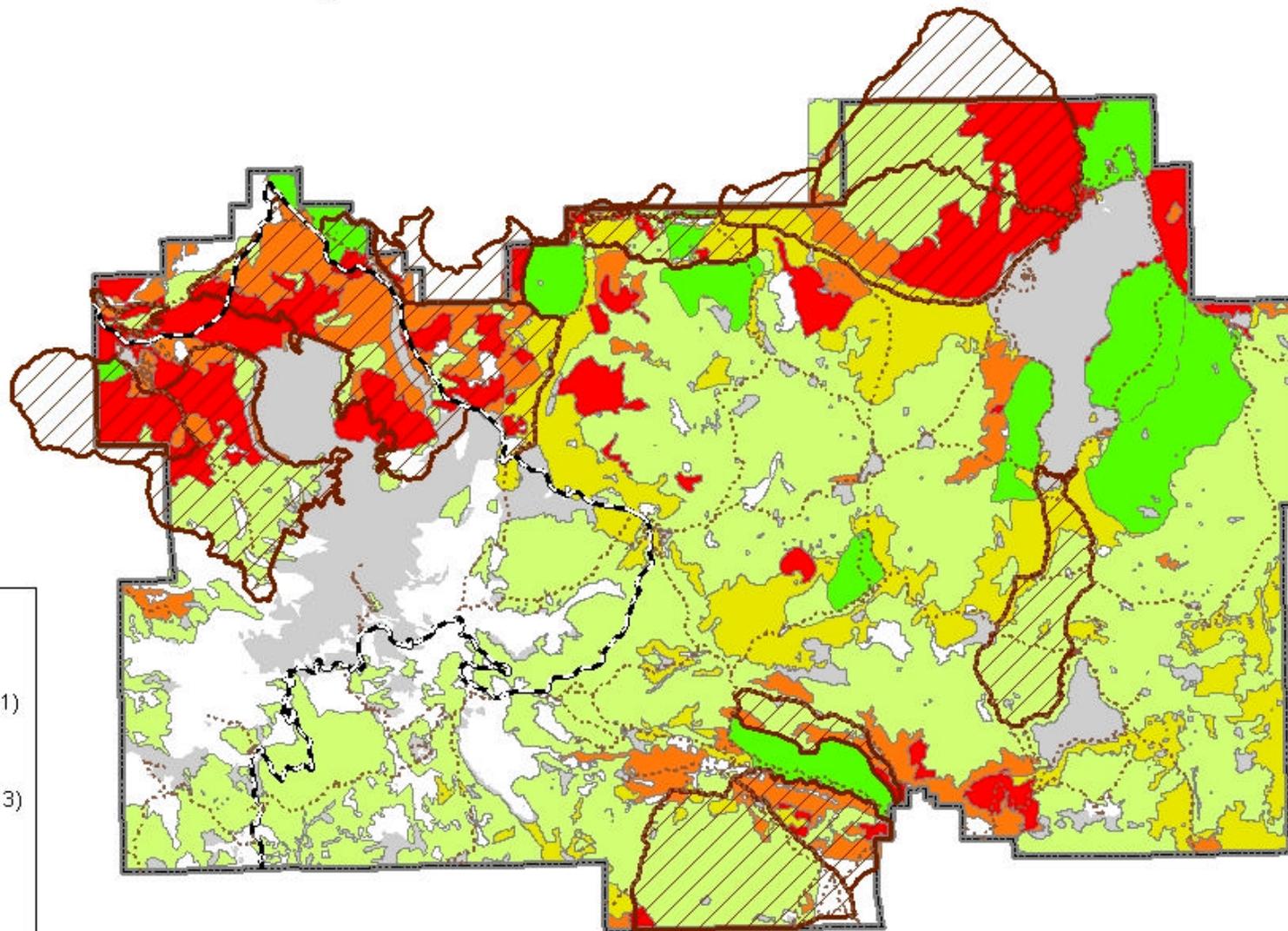
 Bluff Fire on 9/8/04 - 3148 acres



Northern Rockies II  
Ruth Robinson - G757



# FRID - Long Term Fuels Treatment Overlay



**FRID**

- Low (< 0)
- Moderate (0 - 1)
- High (1 - 2)
- Very High (2 - 3)
- Extreme (> 3)

**Other Vegetation**

- Barren
- Not Analyzed

**Treatment Units**

- Hatched area





June 16



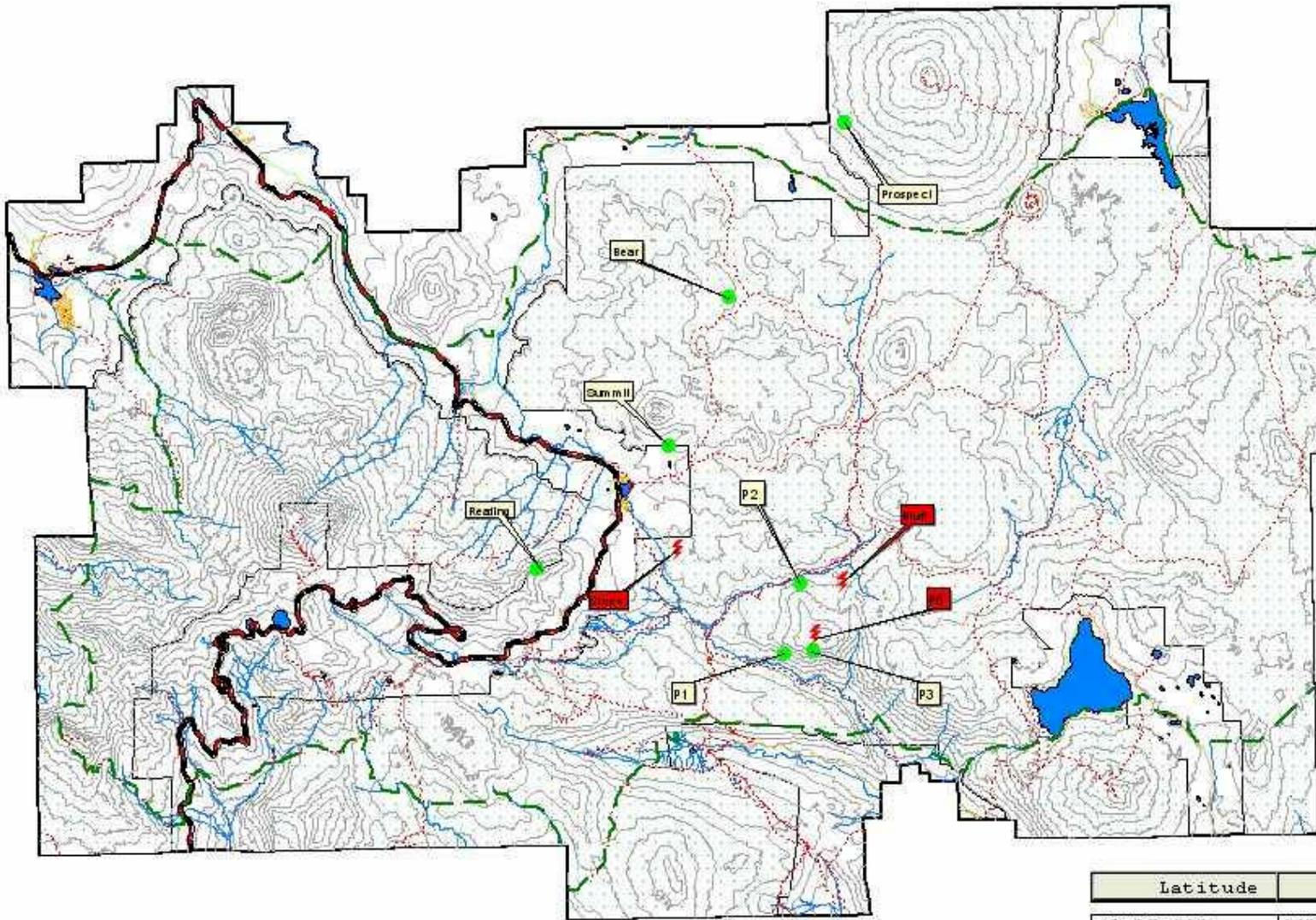
# June 28

- 10 new fires
- 9 Fire Use
- 1 Appropriate Management Response, “Suppression”
- Phone notification, Shasta AQMD





Lassen Volcanic National Park



- Active Fires
- Inactive Fires
- Wildland Fire Use Zone
- Trails.shp
- Roads**
- NPS-1
- Paved
- Gravel
- Dirt
- 4WD
- Trail
- PCT
- Streams
- Contours
- Wilderness Area
- Lakes
- Park Boundary



Latitude	Longitude	Name
40 27.750	121 23.136	P1
40 28.319	121 22.805	P2
40 27.650	121 22.560	P3
40 27.815	121 22.513	P8
40 28.844	121 24.549	Creek
40 30.072	121 24.661	Summit
40 31.797	121 23.721	Bear
40 28.644	121 26.706	Reading
40 28.410	121 22.221	Bluff
40 33.804	121 21.942	Prospect







# Bluff July 6

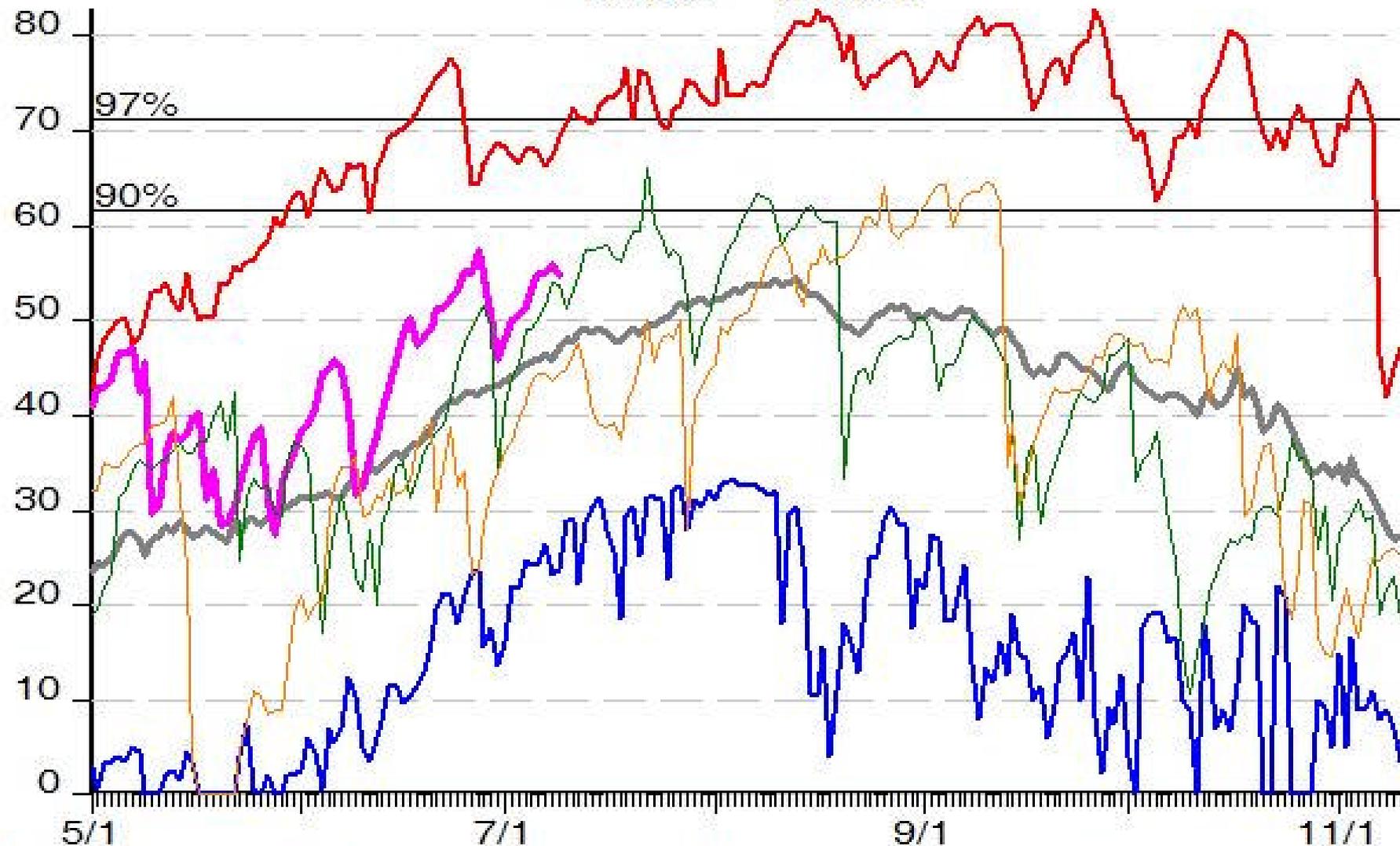






# SIG - Lavo 1962 - 2004

Energy Release Component



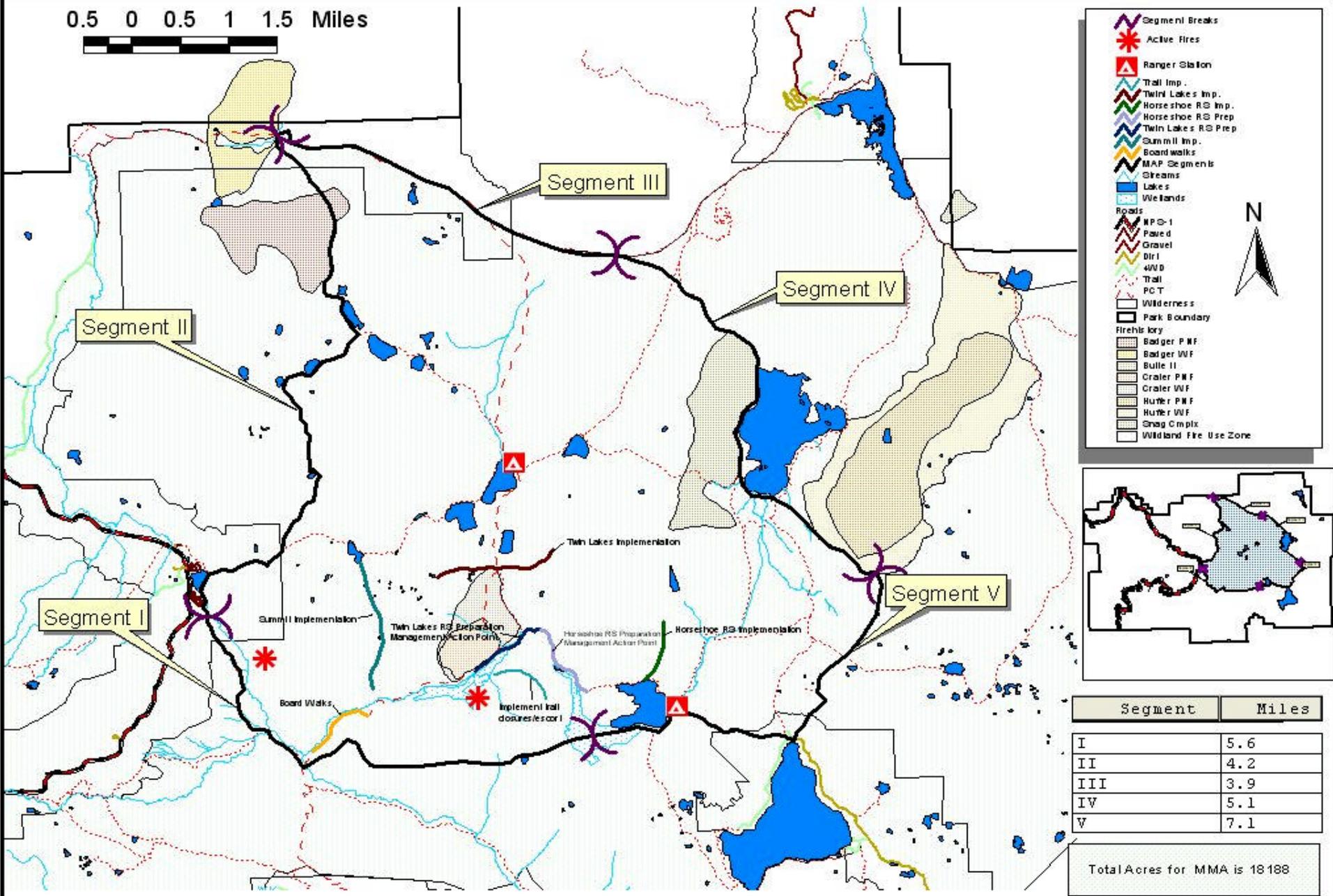
- Avg
- Max
- Min
- 2004
- 1997
- 1996

**1 Day Periods**

Model: 7G  
7109 Wx Observations  
FF+3.0.5 07/09/2004-16:48



0.5 0 0.5 1 1.5 Miles



**Legend**

- Segment Breaks
- Active Fires
- Ranger Station
- Trail Imp.
- Twin Lakes RS Imp.
- Horse shoe RS Imp.
- Horse shoe RS Prep
- Twin Lakes RS Prep
- Summit Imp.
- Board walks
- MAP Segments
- Streams
- Lakes
- Wetlands

**Roads**

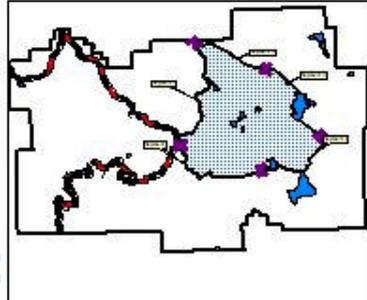
- NPO-1
- Paved
- Gravel
- Dirt
- 4WD
- Trail
- PC T

**Wilderness**

- Wilderness
- Park Boundary

**Fire History**

- Badger PMF
- Badger W/F
- Bulle II
- Crater PMF
- Crater W/F
- Hutte PMF
- Hutte W/F
- Shag Complex
- Wildland Fire Use Zone



Segment	Miles
I	5.6
II	4.2
III	3.9
IV	5.1
V	7.1

Total Acres for MMA is 18188



**July 12**  
**3 acres**





**July 18**  
**10 acres**  
**SMP**

August 15

25 acres

8/15/2004





August 18

30 acres

August 20  
35 acres  
7am smoke





An aerial photograph of a vast, forested landscape. The terrain is covered in dense green trees, with several large, blue lakes scattered throughout. In the distance, mountain ranges are visible under a clear blue sky with some light clouds. A thick layer of white mist or smoke drifts across the middle ground, partially obscuring the forest. The overall scene is bright and expansive.

**August 24**  
**50 acres**

8/24/2004







August 30

86 acres

An aerial photograph of a vast, mountainous landscape. The foreground and middle ground are dominated by dense green forests. In the center, a fire is burning, with thick white smoke rising into the sky. The background shows rolling mountains under a bright blue sky with scattered white clouds. The overall scene is a dramatic natural event in a wilderness area.

**August 31**  
**Media Day**  
**on the Flight in...**













**September 1**

**7am**

**Approx 150-250 acres**

**September 1**  
**1700hrs**  
**Approx 700 acres**







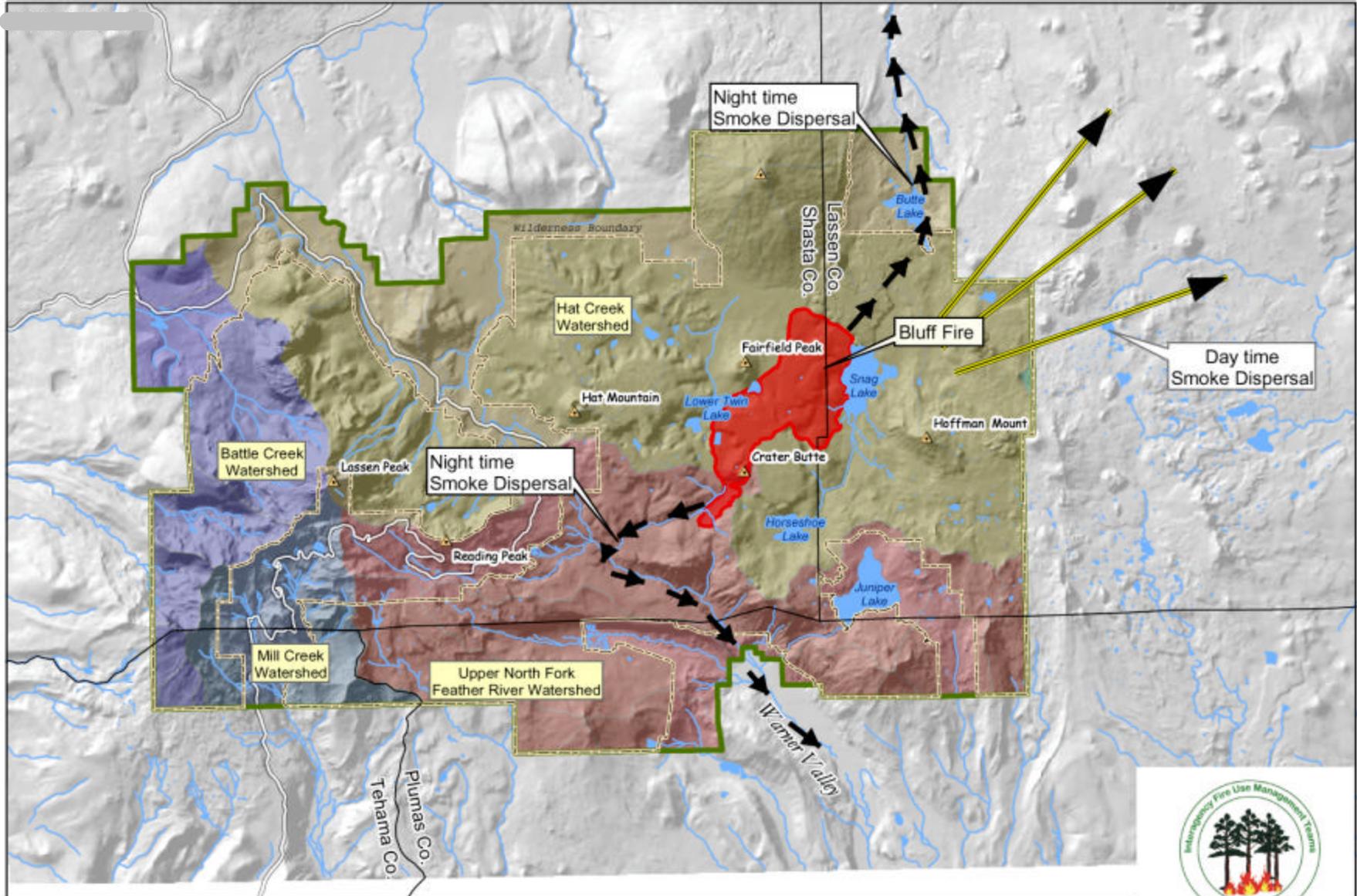
# Lesson Learned

- From WFU Protocol- “LMA to notify the Air District of the growth of the WFU beyond 100 acres or 250 acres within 24 hours.”
  - Lassen staff notified AQMD of fire growth above 100 acres.
  - Several 1pm calls missed at this time as well.
- NEXT TIME-Assign one person to handle smoke if practical.

# Fire Use Management Team Arrived

- Assisted in updating SMP
- Daily smoke mitigation actions as part of IAP
- Dedicated Smoke Tech





Bluff Fire - Day & Night Smoke Dispersal



Northern Rockies II  
Ruth Roberson - QJST



September 5



September 7





















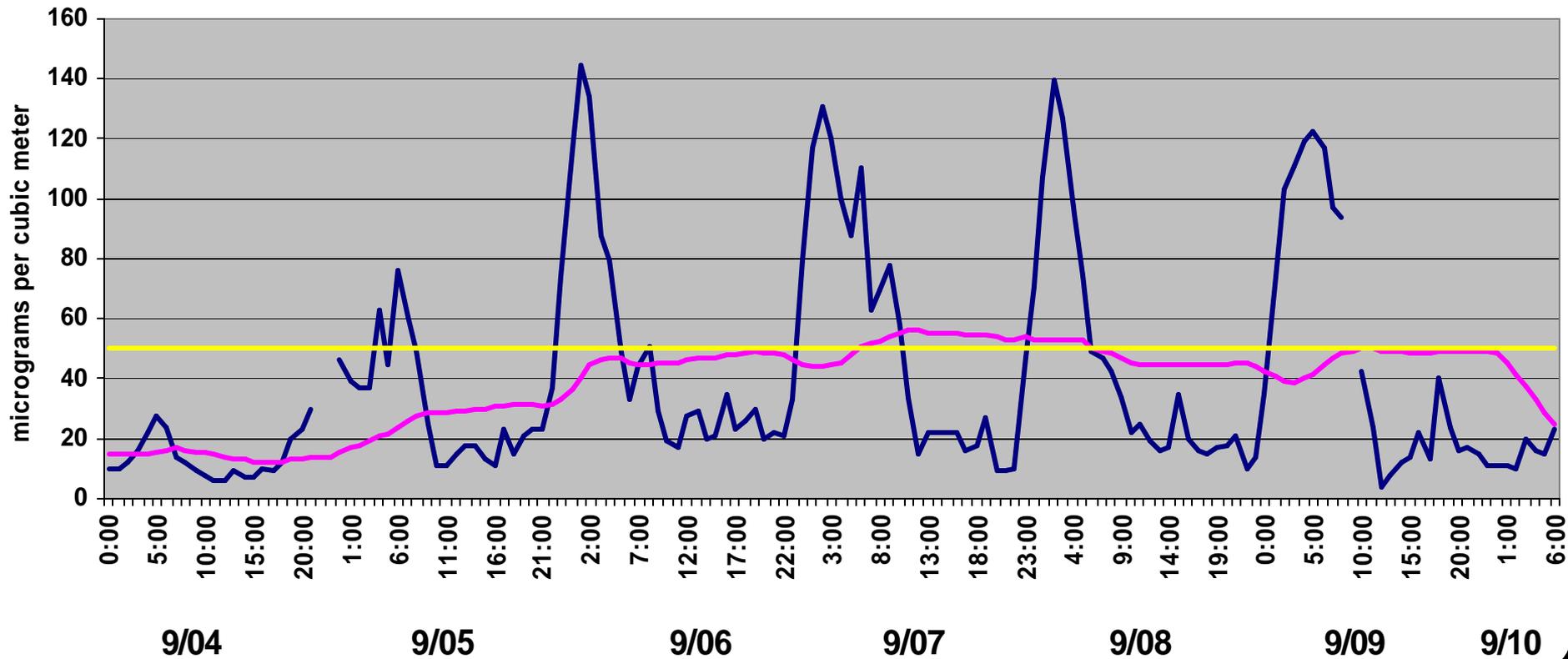
September 9





# Chester PM 10 BAM Readings

- 1 hour average
- 24 hour average
- 24 hour health standard



# Smoke Issues

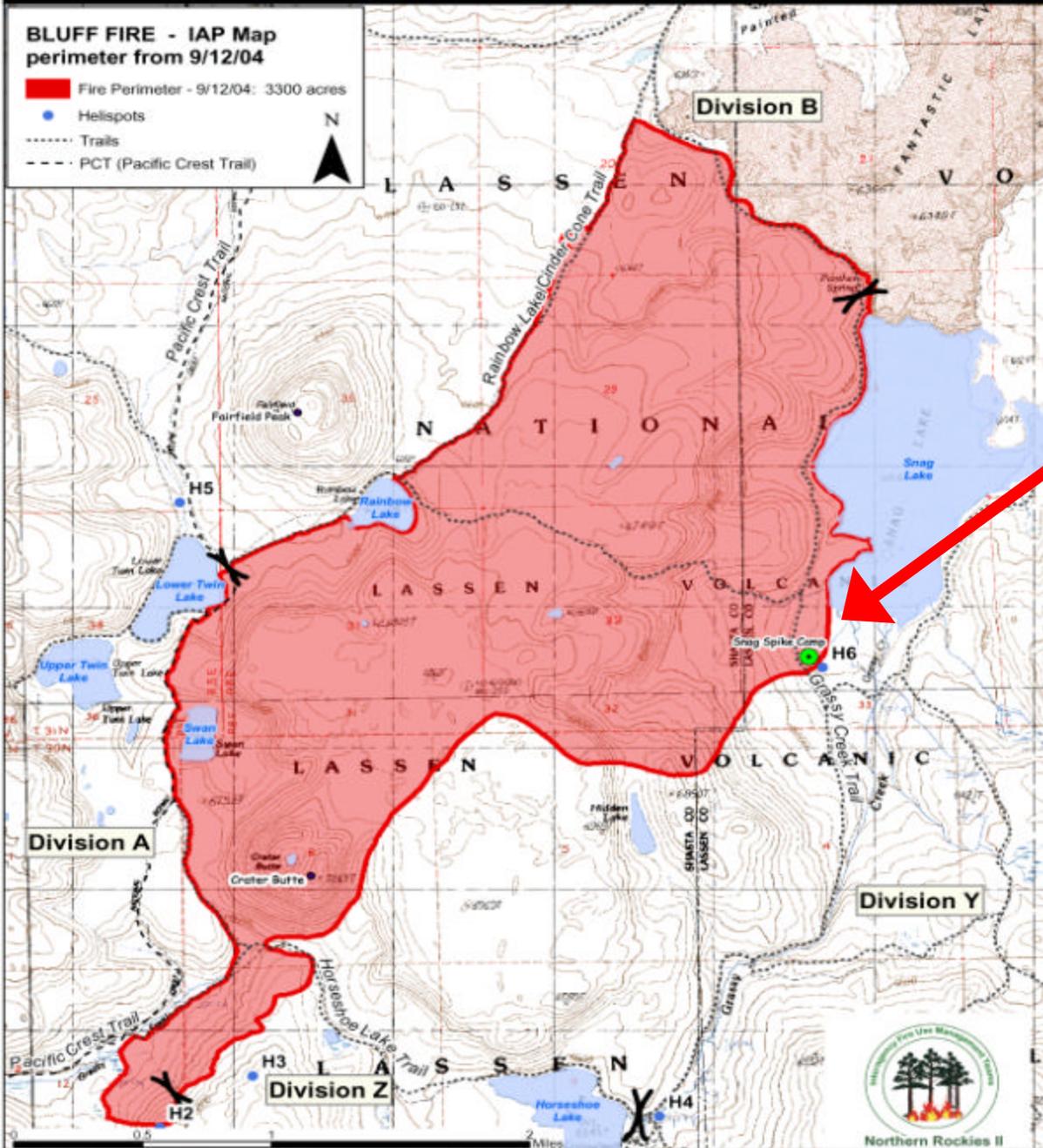
- 5 days of smoke in Chester
- 1 Day exceeded CA 24 hr PM 10
- Fire burned for more than 120 days



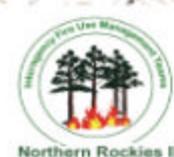


**BLUFF FIRE - IAP Map perimeter from 9/12/04**

- Fire Perimeter - 9/12/04: 3300 acres
- Hellspots
- Trails
- - - PCT (Pacific Crest Trail)



Cut line starting on the 8th







September 12









9.13.2004

September 24





An aerial photograph of a dense forest of tall, thin trees. A plume of white smoke rises from a fire in the center of the image. The ground is covered in brown pine needles and some green grass. The text "Hidden Fire" and "October 1" is overlaid in the bottom right corner.

**Hidden Fire**  
**October 1**

Hidden fire, final size 19 acres



An aerial photograph of a forest. The trees are mostly green, but there are several areas where the ground is brown and charred, indicating a fire. A large plume of white smoke rises from the center of the image, spreading outwards. The text "Suppressed 4 WFU candidates" is overlaid at the bottom in a yellow and white font.

Suppressed 4 WFU candidates

# Lessons Learned

## ■ Public Information

- Thought we were doing good...TV, newspapers...
- Not a smoke problem, but a public information problem

People upset because they did not know about fire

- Careful about what WE say-to AQMD as well

“The fire will burn until the snow puts it out”

Estimating the fire size

# Lessons Learned

- Public Information, cont.
  - Information hurdles in Chester
    - Newspaper comes out once a week
    - Posting bulletin boards
- LED TO NEW INFO PLAN
  - New Fire Information Boards
  - Call for e-mail info

# Hurdles

- Smoke Sensitivity-
  - No calls from Old Station/Burney
- True smoke complaints vs. information calls
- True smoke complaints vs. those who disagree with WFU/use smoke as leverage

# What Went Well?

- Communication w/ AQMD
  - Tense at times, but we worked together
- WFU Protocol
- Good regional press coverage
  - Radio, TV, Newspapers
- Excellent safety record

# Bluff Fire Effects

- NPS Mission vs. all the tools
  - WFU best tool in many circumstances
  - Could not write a prescription like Bluff
- True mosaic
- Large growth days above 97<sup>th</sup> percentile ERC
  - Some fire effects *required* 97<sup>th</sup> percentile ERC





9.7.2004



9.4.2004







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