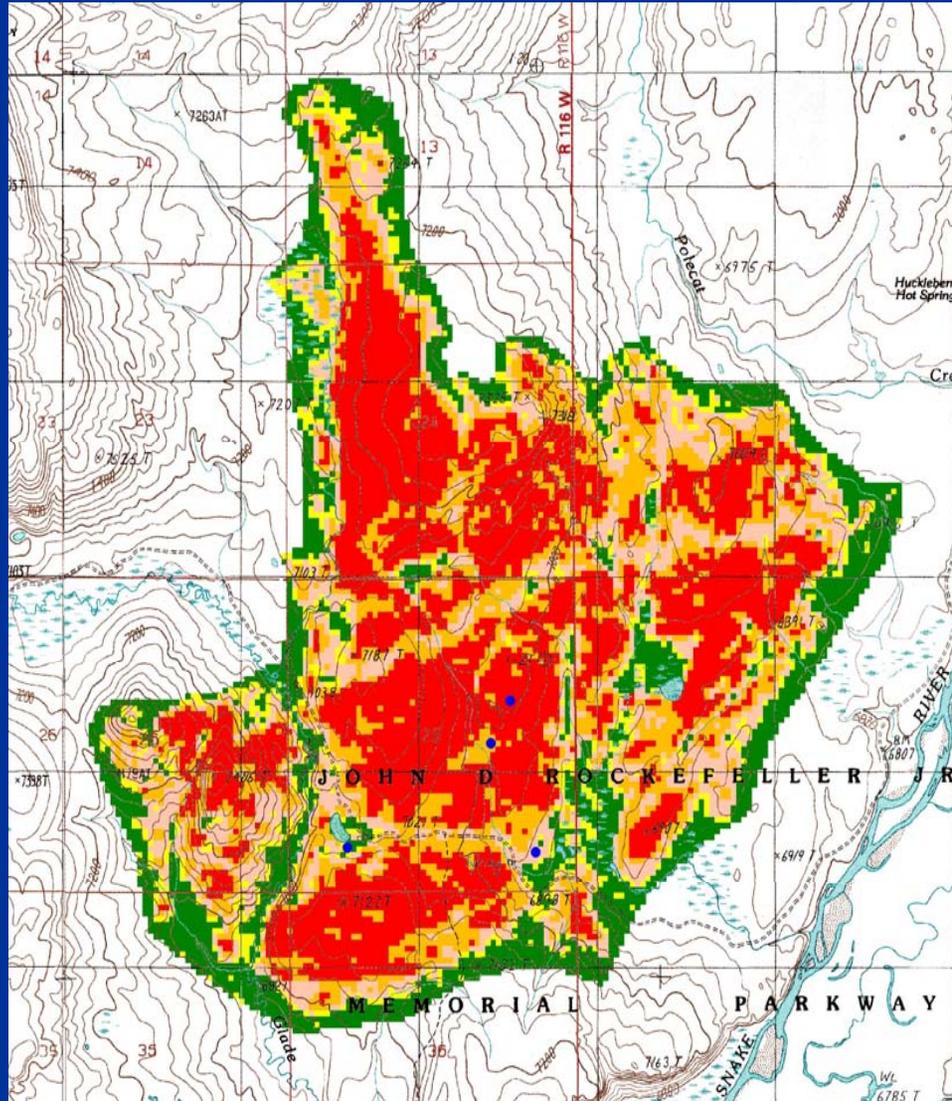


# Burn Severity

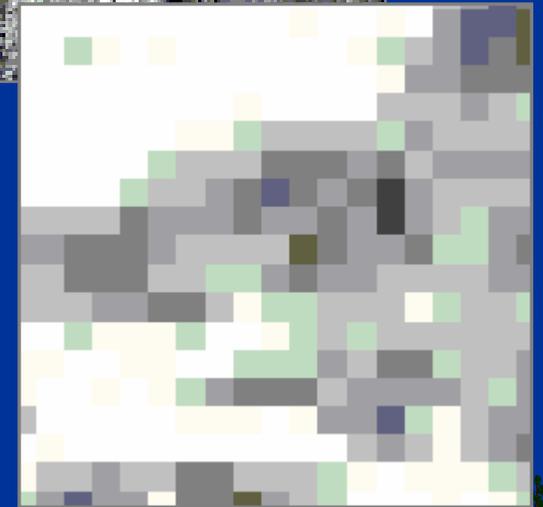
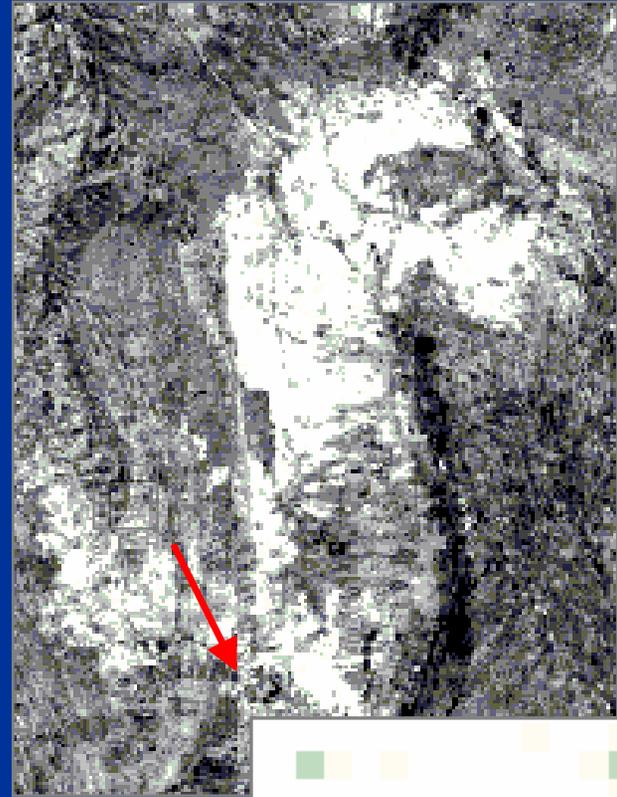
[http://burnseverity.cr.usgs.gov/fire\\_main.asp](http://burnseverity.cr.usgs.gov/fire_main.asp)

- Website for imagery, classified data and protocols
- All fires greater than 300 acres on NPS
- Fire atlas project ongoing 8 parks
- nate\_benson@nps.gov



# Burn Severity

- remotely sensed using satellite imagery (Landsat)
- landscape assessment (30m x 30m pixel size defines spatial resolution)
- “ground truthed” with a process called Composite Burn Index (CBI)



# Monitoring Trends in Burn Severity - MTBS

- Map burn severity of recent and future fires
- All fires that are 500 acres or greater for eastern states and 1,000 acres or greater for the rest of the US
- Burn severity assessments and field validation methods – found at FIREMON website



# MTBS Status

- 2006-2010 fires: mapped and reported annually by 3rd Quarter of following fiscal year
- 2000-2005 fires: mapped and reported by 3rd Quarter of FY 2008
- 1982-1999 fires: mapped and reported by 2nd Quarter of FY 2011



# What's it good for?

- GIS-ready maps and data for pre- and post-fire management decisions and monitoring
- FRCC and LANDFIRE can integrate burn data produced at compatible spatial scale for validation and updating purposes
- Update fuels layers
- Look for areas of resource concern – invasive plants, cultural resources





# Seeds for Interagency Monitoring? NPS Fire Ecology Program

Kara Paintner

February 2006



# Overview

- NPS Fire Ecology
  - Crew locations and fire ecologists
  - Work they do
- Monitoring Trends in Burn Severity



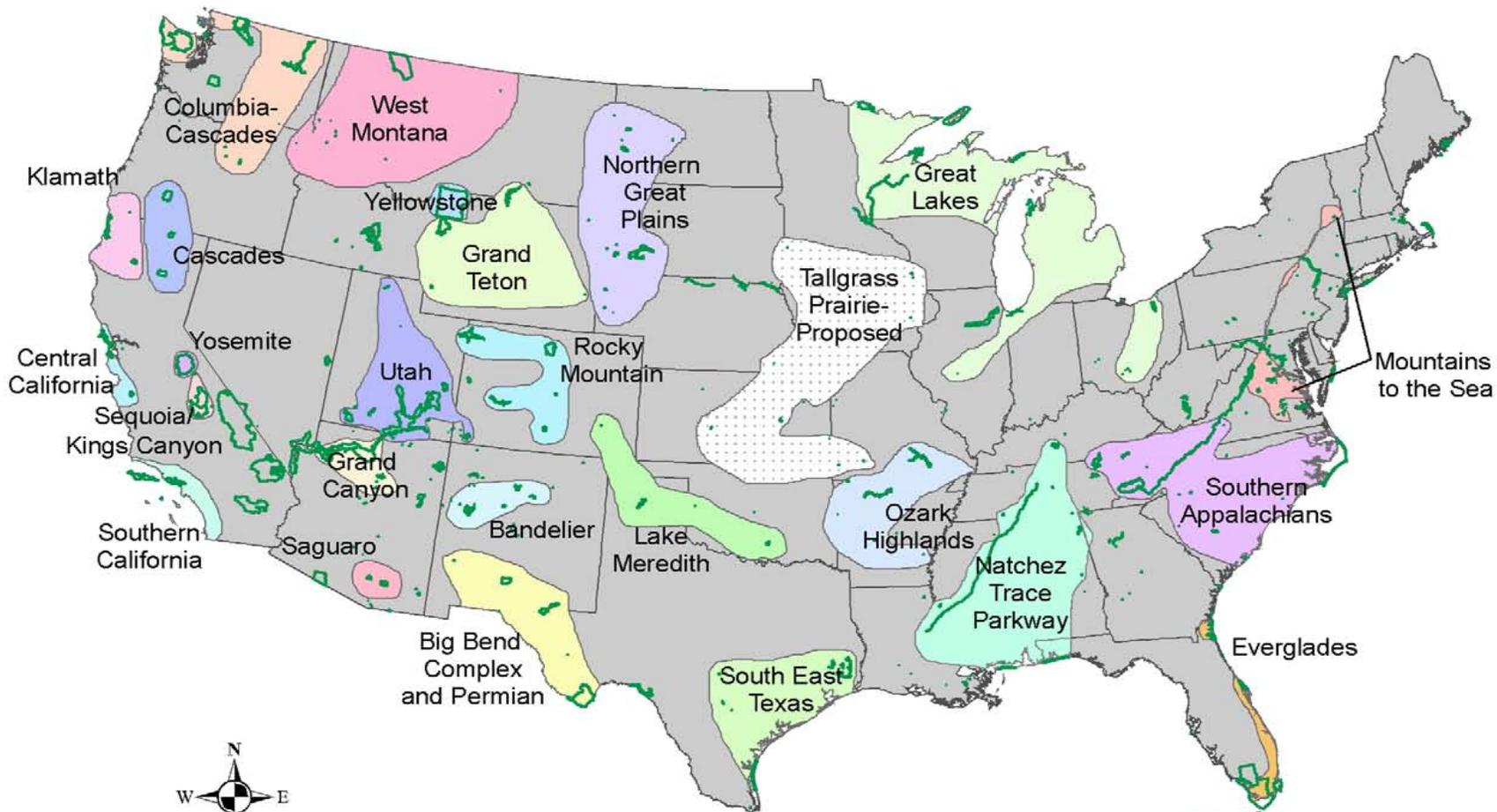
# Fire Ecology Staff

- 22 park fire ecologists with field crews
- 7 regional and 2 national positions
- Park crews distributed based on prescribed fire and mechanical treatment work loads



# Fire Ecology Program Networks

National Park Service  
U.S. Department of the Interior



0 125 250 500 Miles  
Lambert Conformal Conic (North America)

# What Park Crews do...

- Monitor the effects of fire on vegetation and fuels
  - Plots in prescribed burn units and WFU
  - Burn severity
  - Plots in mechanical thinning areas
  - Weather and fire behavior data during prescribed burns and wildland fire use
- Summarize and present data for managers
- Firefighters, Resource Advisor



# Park Fire Ecologists

- Summarize and present data
- Promote and act as liaison for fire related research
- Supervise Lead Fire Effects Monitor
- Coordinate Resource Advisor Program
- Primary Liaison for Natural Resource Issues with Fire and Resource Management



# Opportunities



- Interagency crews – Grand Teton NP
  - Sponsor seasonal position(s) on NPS crews
  - Buy additional payperiods for STF employees to do data analysis or planning
- Share data and/or data collection
- Other ideas.....



# Contacts in RM GACC

- Nate Williamson – Rocky Mountain
- Cody Wienk – Northern Great Plains
  
- Eric Miller – Yellowstone
- Diane Abendroth – Grand Teton
  
- [http://www.nps.gov/fire/fire/fir\\_eco\\_contacts.html](http://www.nps.gov/fire/fire/fir_eco_contacts.html)



# Interested in Knowing More



[Kara\\_paintner@nps.gov](mailto:Kara_paintner@nps.gov)

(970) 267-2121

Your regional or park  
ecologists

[http://www.nps.gov/fire/fire/  
fir\\_eco\\_contacts.html](http://www.nps.gov/fire/fire/fir_eco_contacts.html)



# History

- 1996 National Fire Effect Monitoring Program
- Fire Monitoring Handbook (FMH)
- Trend monitoring
- FMH.EXE Software

National Park Service  
U.S. Department of the Interior



## Fire Monitoring Handbook





**FEAT and FIREMON Integrated**  
into a  
~ a single application ~



**FIREMON**  
Fire Effects Monitoring and Inventory Protocol

**Nate Benson**

National Park Service

**Duncan Lutes**

Systems for Environmental Management



**FireLab**

ROCKY MOUNTAIN RESEARCH STATION  
MISSOULA, MT



**USGS**  
science for a changing world



SYSTEMS FOR  
ENVIRONMENTAL  
MANAGEMENT

**SPATIAL  
DYNAMICS**

**AXIOM**  
IT SOLUTIONS INC.



# FFI

## FEAT - FIREMON Integrated

- A single point of entry for fire effects monitoring, including data entry, spatial query and reporting and statistical analysis.
- A tool that interfaces with other monitoring applications across land management agencies.
- A tool that interfaces with FRCC, Landfire, FPA and burn severity mapping.

