

# Fire Policy & Management in Wilderness

Special thanks to:  
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for RRT 490

## Outline

Evolution of Fire History and Policy

A Closer Look at an Individual Fire Plan

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- Long before humans arrived in North America, there was fire. It came with the first lightning strike and will remain forever.



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## Fire in Wilderness

- Fire is a natural force that has helped shape the character of much of the American wilderness
- Many ecosystems of the primeval American wilderness were fire dependent

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## Historical Context

- During the pre-industrial period (1500-1800), ~145million acres burned annually from wildfires
- Today only 14million acres burn annually from wildfires (50% of this decrease is due to land management actions)

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- A **wildfire** is any fire that is not a prescribed fire
- There are three general methods to respond to a fire:
  - ignore it,
  - attack it, or
  - allow it to burn according to a predetermined plan

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## Historical Perceptions

- Disturbances (such as fire & insects) were viewed as undesirable, preventing forests from attaining or maintaining their natural climax state
- Pinchot began the campaign which regarded fire “as an evil to be stopped through rigorous control”
- Elimination of fire became a primary goal of wilderness & park management

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## Early Roots

- Wildland Fire Control Program initiated in the Adirondacks Reserve, NY (1885)
- Natural fire intervals in ID ceased (1889)
- Forest Reserve Use Book (1905)
- First Mission of the FS (1906)

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## Rocky Mountain Fires of 1910



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## Fire Control/Suppression

- FS Chief Graves states “forestry is 90% fire prevention”
- Weeks Bill (1911)
- National Park Service Organic Act (1916)

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## Fire Control/Suppression

- “Stop the fires” (1923)
- Clark McNary Act (1924)
- 10-acre control objective (1924)
- FS fire suppression policy (1926)

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- In spite of legislation, early firefighting efforts were under funded, disorganized, & ineffective

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## Age of Innovation

- Manpower of the CCC program
- 10A.M. Fire Policy (1935)
- Smokey Bear campaign (1945)
- Formation of firefighting organizations (1950's)
- First aerial fire suppression (1956)

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- Effective technology, labor, organization, equipment were seen as the solution



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## “Fire management”

- The deliberate response to & use of fire through the execution of technically sound plans under specific prescriptions for the purpose of achieving stated wilderness management objectives
- Wilderness fire management implies vegetation management

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## Fire Management

- Leopold Report (1963)
- Wilderness Act (1964)
- Agency policy changes (1967-68)
- 10-Acre Pre-Suppression Policy (1972)

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## Wilderness Act (1964)

- Calls for both wild (untrammelled) & natural conditions
- Using prescribed fire may make the system more natural, but at the cost of being less wild
- Fire, whether natural or prescribed, is the preferred alternative to either continued suppression or mechanical manipulation

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- Federal agencies generally practiced a policy of total fire control at the time the Wilderness Act (1964) was enacted
- Fire policy gradually changed to a policy of fire management

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## Mature & Responsive Programs

- NPS Natural fire program at Sequoia & Kings Canyon National Parks (1968)
- First FS wilderness fire management plan for the Selway-Bitterroot Wilderness (1972)
- National Wildfire Coordinating Group (1976)
- Agency policy changes (1977-85)

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- Yellowstone Fire (1988)



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- Had we not interfered with the natural process by suppressing fire in the first place, this situation might not have occurred. Response to the Yellowstone fires

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## Focus on Prevention & Sustainability

- Fire review (1989)
- BLM Wilderness Management Plan (1990)

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## Challenge of Restoring Fire to the Ecosystem

- Only 88 of the 596 designated wilderness areas (excluding AK) had approved fire plans that allow natural ignitions to burn (1998)
- Even areas with active fire programs continue to suppress many wildfires
- None of the four federal agencies had been able to restore fire to a level near its natural regime

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Current fire management policies of Federal land management agencies generally recognize fire as a natural process in many ecosystems, especially in the West

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## NPS Direction

- NPS is committed to protecting park resources and natural ecological processes; but firefighter and public safety is the first priority in fire management activities

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## NPS Fire Mgmt. Programs

- Until a fire management plan is approved, wildfires will aggressively be suppressed
- Once approved, natural wildfires can be used to accomplish management goals

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## BIA Approach

- Wilderness fire plans allow wildfire to play a natural role in ecological processes, unless human life or property are threatened
- Pioneered use of prescribed fire in wilderness
- No national policy concerning fire management in wilderness areas
- Fire management policies are reservation or agency specific
  - Flathead Reservation Wilderness

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## BLM & FWS History

- Outside of AK, the BLM & the FWS have yet to implement an operational natural fire program in wilderness
- 508 out of 596 designated wilderness areas were still in suppression mode as of the 1998 fire season

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## BLM Strategy

- Primary emphasis has been to prevent impairment of wilderness values rather than to develop & implement fire management plans (1988)
- Fire management options vary from full suppression to using fire to achieve management objectives

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## FWS Action

- Committed to a strong fire management policy
- Wildfire is suppressed aggressively
- Prescribed fire is used to manage habitat & resources to achieve objectives in established refuge plans

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## FS General Trend

- A requirement of wilderness management is to preserve natural conditions



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## FS Wilderness Fire Plans

Four-part plan:

- Includes related plans and supporting documents
- Fire management objectives
- Map of the fire management area
- Proposed & planned actions

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## FS Fire Mgmt. Objectives

- Allow fire to achieve its natural goal
- Use fire to accomplish desired resource management objectives
- Protect life, property, & resources from unwanted fire
- Avoid unacceptable effect of fire & fire suppression

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## 2000 Fire Season Highlight



- We can postpone the inevitable blazes, but-- as the 2000 fire season showed--not indefinitely
- Fire, as a natural process, will never be eliminated from the landscape

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- A Review & Update of the 1995 Federal Wildland Fire Management Policy
- Participants:
  - U.S. Depts. of the Interior, Agriculture, Energy, Defense, Commerce
  - Environmental Protection Agency
  - Federal Emergency Management Agency
  - National Association of State Foresters

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## Key Themes

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- Ecosystem Stability
- Fire Planning
- Fire Operations
- Interagency Coordination & Cooperation
- Program Management & Oversight

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## Overview of 2000 Fire Season

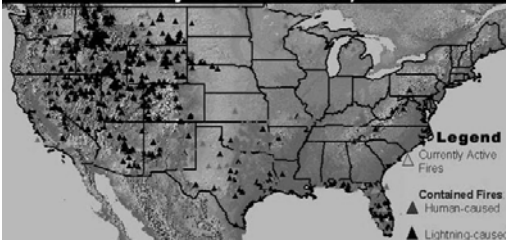
- The 2000 fire season started early with the 1<sup>st</sup> fire occurring in Florida on Jan. 1
- A number of climatic conditions combined to create an unprecedented fire season
- Intense fire behavior never before experienced by veteran firefighters
- Fires were still smoldering in the FC-RONR in December



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## Large Wildland Fire Locations

January 1 to December 21, 2000



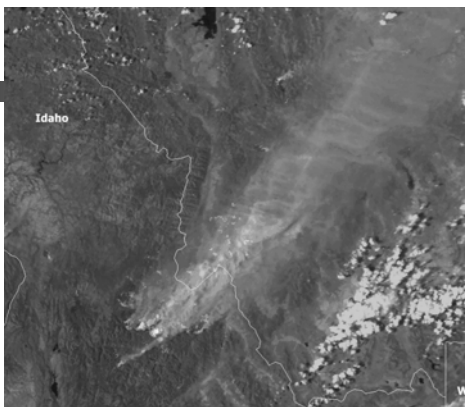
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## 2000 Season Wildfire Stats

- National Fire Stats
  - 90,674 fires
  - 7.3 million acres burned
  - \$1.6 Billion in suppression costs
  - 28,462 firefighters deployed
- Wilderness Fires
  - FC-RONR
    - 556,129 acres of 2.4 million acres burned (23%)
  - Selway-Bitterroot
    - 69,854 acres of 1,296,500 acres burned (5.4%)
  - Gospel-Hump
    - 300 acres of 205,764 acres burned (0.1%)



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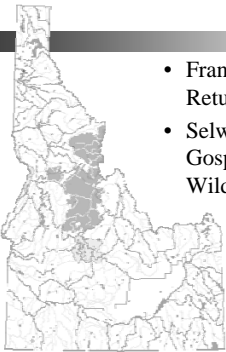
## FC-RONR 2000 Fire Stats



Fire	Acres
Burgdorf	20,542.7
Butts	13,148.8
Clear Creek	41,516.0
Diamond	152,176.9
Filly	2831.4
Flossie	98,189.2
Hamilton	21,218.5
Indian Creek	3,796.1
Kitchen	3,006.7
Little Pistol	51,664.7
Lonely	4,335.1
Otter	725.9
Packer Meadows	1741.7
Papoose	3,495.8
Parker	192.0
Shellrock	112,061.0
Three Bears	25,386.5
<b>Total Acres</b>	<b>556,128.8</b>

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## Specific Wilderness Fire Management Plans



- Frank Church-River of No Return Wilderness
- Selway-Bitterroot and Gospel-Hump Wilderness Areas



## Frank Church-River of No Return Wilderness

- Size: 2,366,698 acres (2<sup>nd</sup> largest in lower 48, 6<sup>th</sup> largest including Alaska)
- Natural fire regimes have been interrupted since the 1930's
- In certain areas, fire has been suppressed 2.7 to 4.5 times that of historic intervals [i.e., 61.9 yrs (present) compared to 13.8 yrs (historic) since previous fire event]

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## Salmon River Unit

- Salmon River Breaks Zone
  - 235,000 acres (10% of FC-RONR)
  - From 1960 to 1983 only 345 acres burned annually
  - Historic levels are estimated at 12,256 acres annually
  - Fires suppressed to 2.8% of historic levels, 11,911 acres left unburned per year
  - 285,864 acres suppressed over 24 years

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## FC-RONR Wilderness Fire Management Plan

- Objectives: (from FSM 2324)
  - Permit lightning caused fires to play, as nearly as possible, their natural ecological role within wilderness

–Reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness.



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## Objectives (cont.)

- The use of fire as a means of restoring and perpetuating natural ecosystems within the Wilderness
- Coordinating with the Selway-Bitterroots and Gospel-Hump Wilderness Fire Plans
- Develop a program for prescribed fire for planned and unplanned (natural) ignitions to achieve wilderness objectives.
- Direction regarding appropriate suppression responses (control, containment, or confinement), including any constraints on techniques, methods, tools, and equipment.

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## Objectives (cont.)

- Maintain cost effective prescribed fire and fire suppression programs within the wilderness
- Provide a smoke management program that reduces the impacts of residual smoke on air quality





## Public Involvement

- A public comment period was held to allow people to voice their opinions for their preferred fire management alternative.
- Four alternatives were given...

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## Public Involvement: Public Response

- Alt. A: Cautionary approach to naturally ignited prescribe fire (23.8%)
- Alt. B: Full suppression (0%)
- Alt. C: Program for both “planned and unplanned” prescribed fire (36.5%)
- Alt. D: Zealous approach to Alt. C, which allows human ignited (non-agency) to be considered a natural fire (34.9%)

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## Economic Considerations

- A combination of naturally ignited and agency ignited fires is the the most cost efficient strategy.
- Full Suppression Strategy (\$421/acre)
- Control, contain, and confine suppression responses and EFSA (\$118/acre)
- Unplanned (natural) fires only (\$52/acre)
- Naturally (must monitor) and agency (when, where and how) ignited fires (\$35/acre)

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## Positive and Negative Effects of Implementation

- Positive:
  - Fire will play a more natural role
  - ↑ vegetative diversity and nutrient recycling
  - ↓ fuel accumulation and fire expenditures
- Negative
  - ↑ complexity of management decisions
  - Damage to private property
  - Loss of structures (private and public)
  - ↑ smoke causing visibility and health problems
  - Loss of revenue for outfitters

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## 2001 FC-RONR Wilderness Fire Use Guidebook

- The 1990 plan is still sound
- Substance of the plan will not drastically change
- Energy Release Charts will be updated
- Inclusion of 2001 Federal Wildland Fire Policy
- Revision will fit the format of *Selway Bitterroot Wildland Fire Use Guidebook (SBFG)*

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## Selway-Bitterroot Wildland Fire Use Guidebook

- “guidebook” has replaced “plan”
- The idea is to avoid the strictness of a plan and replace it with guidelines and recommendations to adhere to fire policy
- This format is slowly being introduced to many other wilderness areas (ie, Gospel-Hump Wilderness Area)

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## Selway-Bitterroot Wildland Fire Use Guidebook

- The SBFG combined three individual plans
- Three staged process
  - Stage 1: Initial Decision
  - Stage 2: Short-term implementation actions
  - Stage 3: Long-term implementation actions
  - Stage 4: Periodic Assessment

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## Selway-Bitterroot Wildland Fire Use Guidebook (SBFG)

- "Wildland Fire Implementation Plans (WFIP) to implement wildland fire use and may delegate approval authority to the District Ranger where appropriate (FSM 5140.42)."
- "The plan follows the development of a natural ignition into a wildland fire for resource benefit (WFURB), from initial fire assessment through short-term implementation actions and up to long-term assessment "

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## SBFG Objectives

- Permit lightning-caused fires to play, as nearly as possible, their natural ecological role within wilderness.
  - Reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness.
- And also....
- To integrate consideration of fire protection and use into the formulation and evaluation of land and resource management objectives, prescriptions and practices.

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## SBFG Objectives (cont.)

- To provide a cost-effective level of wildfire protection on National Forest System lands commensurate with the threat to life and property and commensurate with the potential for resource and environmental damage based on hazard, risk, values, and management objectives.
- To minimize the sum of (a) the fire program cost, plus (b) the net change in the value of planned resource outputs due to fire.
- To protect, maintain, and enhance the production and quality of national forest resources through fire protection and use of prescribed and natural fire.

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## Future Predictions and Recommendations

- Increased use of prescribed natural fire, especially agency ignited prescribe fires
- Increased consideration of allowing human caused fires (non-agency ignited) to burn as long as they adhere to the prescription
- Fire returning as a natural component of the wilderness ecosystem
- Increase public involvement and education
- Large fires will be allowed to enter wilderness areas from adjacent lands, but small fires will continued to be suppressed (FOR 426)

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The richest values of wilderness lie not in the days of Daniel Boone, nor even in the present, but rather in the future.

-Aldo Leopold

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