WILDERNESS FIRE & THE US FOREST SERVICE

How 50 Years of Fire in US Forest Service Wilderness Areas Changed The Way We Manage All Our Fires

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"FIRE USE"

Is when we apply knowledge about fire behavior and fire effects to adjust the way we apply or respond to fire in order to realize some benefit or advantage.

- A mind-set or attitude based on your perception of the situation:

Fire Use = A Desire to Take Advantage of a Perceived Opportunity Created by Fire

Fire Protection = A Desire to Guard Against a Perceived Danger/Threat Created by Fire

Important Note: These definitions are not recognized by the USFS, NWCG, or anyone else for that matter, just something I find handy so I use it…a lot!!

WILDERNESS FIRE MANAGEMENT CONTRIBUTION #1: A LIGHTNING FIRE IS NOT ALWAYS A BAD THING

The Framework of Three Kinds of Fire

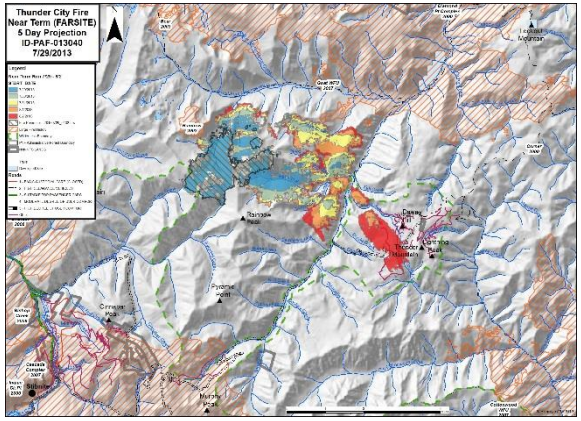
- First Came Wildfire = Bad, Make it Go Away!
- Then Prescribed Fire = Good, Because It Serves Our Purpose!
- And Finally Prescribed Natural Fire/Wildland Fire Use = Good, When It Serves Our Purpose…Otherwise it's a Wildfire.

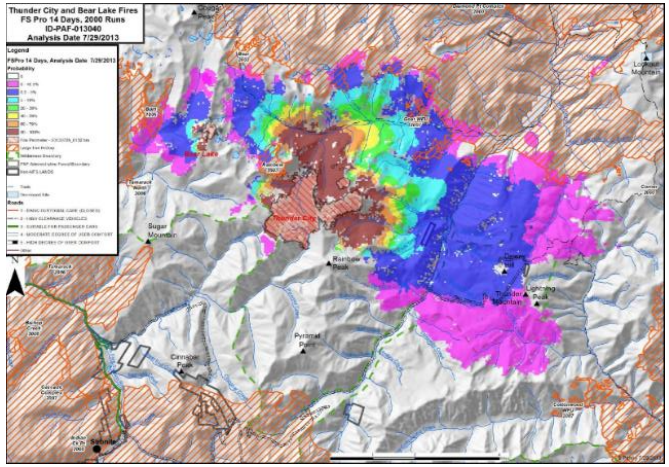
PHILOSOPHICAL INNOVATIONS BORN FROM WILDERNESS FIRE MANAGEMENT

- Recognizing potential for positive outcomes from fire
  - In Federal Fire Policy
    - "Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of fire. The circumstances under which a fire occurs, and the likely consequences on firefighters and public safety and welfare, natural and cultural resources, and values to be protected dictate the appropriate management response to fire."
      – *1995/2001 Federal Wildland Fire Management Policy*
  - In National Cohesive Wildland Fire Management Strategy
    - "To safely and effectively extinguish fire when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire."
  - In Land Management Plans
  - In our Accomplishment Reporting

TECHNOLOGICAL INNOVATIONS BORN FROM WILDERNESS FIRE MANAGEMENT

- Risk analysis, Decision Support & Planning
  - Wildland Fire Decision Support System (WFDSS)
- Fire Behavior Analysis and Forecasting Tools
  - Farsite – 1 to 3+ day spread projections
  - FSPro – 7 to 30+ day spread probabilities
  - FlamMap – Predictions of fire intensity (fire effects)
- Remote Monitoring
  - I-RAWS
  - WebCams
  - Modis, IR Mapping





OPERATIONAL INNOVATIONS BORN FROM WILDERNESS FIRE MANAGEMENT:

- Long-Term Fire Implementation Plan (Management Action Points, Structure Plans)
- Fire Management Skill Positions
  - Strategic Operational Planner (SOPL)
  - Long-Term Fire Behavior Analyst (LTAN)
  - Geospatial Fire Analyst (GSAN)
- Wildland Fire Modules
  - Fire Effects Monitors (FEMO)
- Minimum Impact Suppression Techniques
  - Don't damage what you're there to protect

OUR #1 CHALLENGE: MAKING MENTAL LEAP FROM 3 KINDS OF FIRE TO 2 KINDS OF FIRE

Prescribed Fire = Planned

Wildfire = Unplanned

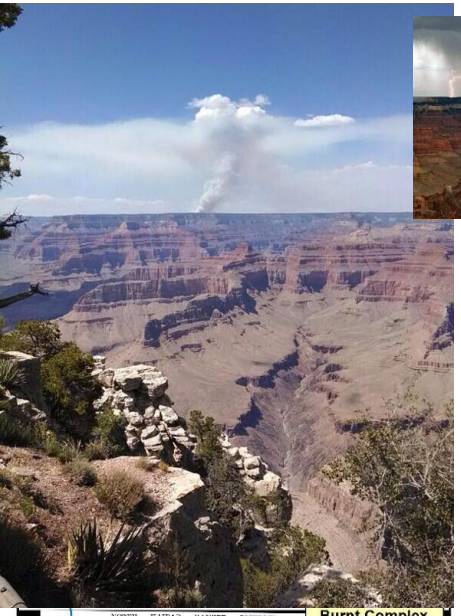
> *"A wildland fire may be concurrently managed for one of more objectives and objectives can change as the fire spreads across the landscape."*
> – *2009 Federal Fire Policy Guidance*

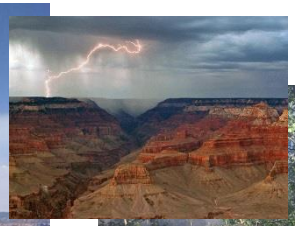
- Most Flexible & Potent Fire Policy We Have Ever Had
  - Ability to Do What's Right and Adapt to Changes as They Occur
- Major Shift in Our Thinking
  - Agility and Adaptability Means No more "Good" or "Bad" fires
- Eliminated the WFU Classification - BUT
  - Did Not Eliminate Practice of Using Wildfires to Achieve Desired Conditions as Defined in LMP's
  - We Still Evaluate "Good" and "Bad" Outcomes – Did we meet LMP objectives?

WILDERNESS FIRE AND THE SHIFT IN THE FIRE USE DOMAIN

Elements	PNF/WFU Era	Present
Where does it happen?	Wilderness, Usually a Large One	Wilderness, Multiple Use, Not Necessarily Large
Why do it?	Allow Fire to Play its Natural Ecological Role in Wilderness	Add: Hazardous Fuels Reduction; Protect Values from Future Fire Risk; Habitat or Population Management for Select Species; etc.
What do operations look like?	Passive, Defensive; Let Nature Do The Work; Low to Moderate Tempo; High Tempo Usually Before or After Conversion to Wildfire	Opportunistic; Use Nature to Advantage But Engage as Necessary to Meet Objectives; Operational Tempo Varies From Low to High as Situation Dictates.
What does "success" look like?	Stayed within Wilderness	Fire Effects Moved Area Closer to Desired Condition as Defined by the Land Management Plan

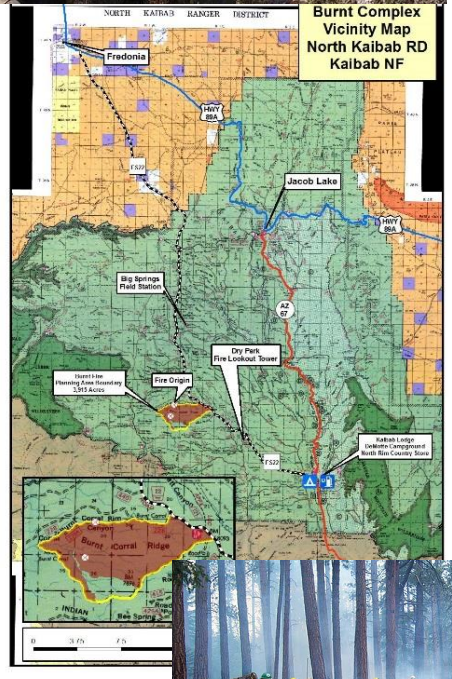
Grand Canyon National Park and Kaibab National Forest, Arizona

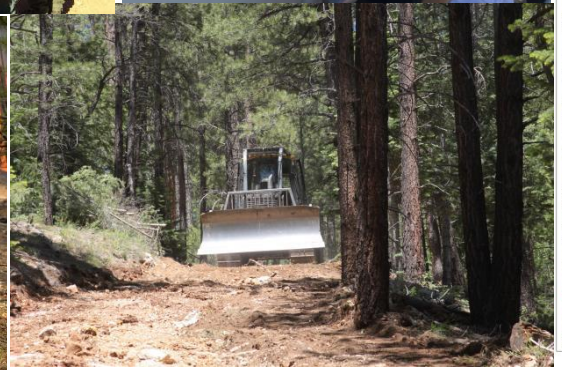


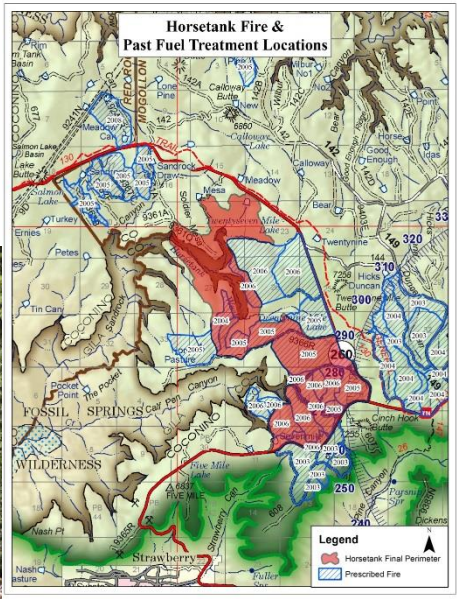


- Management Objective – Use fire to maintain fire-adapted ecosystems
- Multiple Use & Wilderness Involved
- Not Passive Fire Response
- Control Features Include Fuels Treatments, Roads, Natural Barriers, etc.

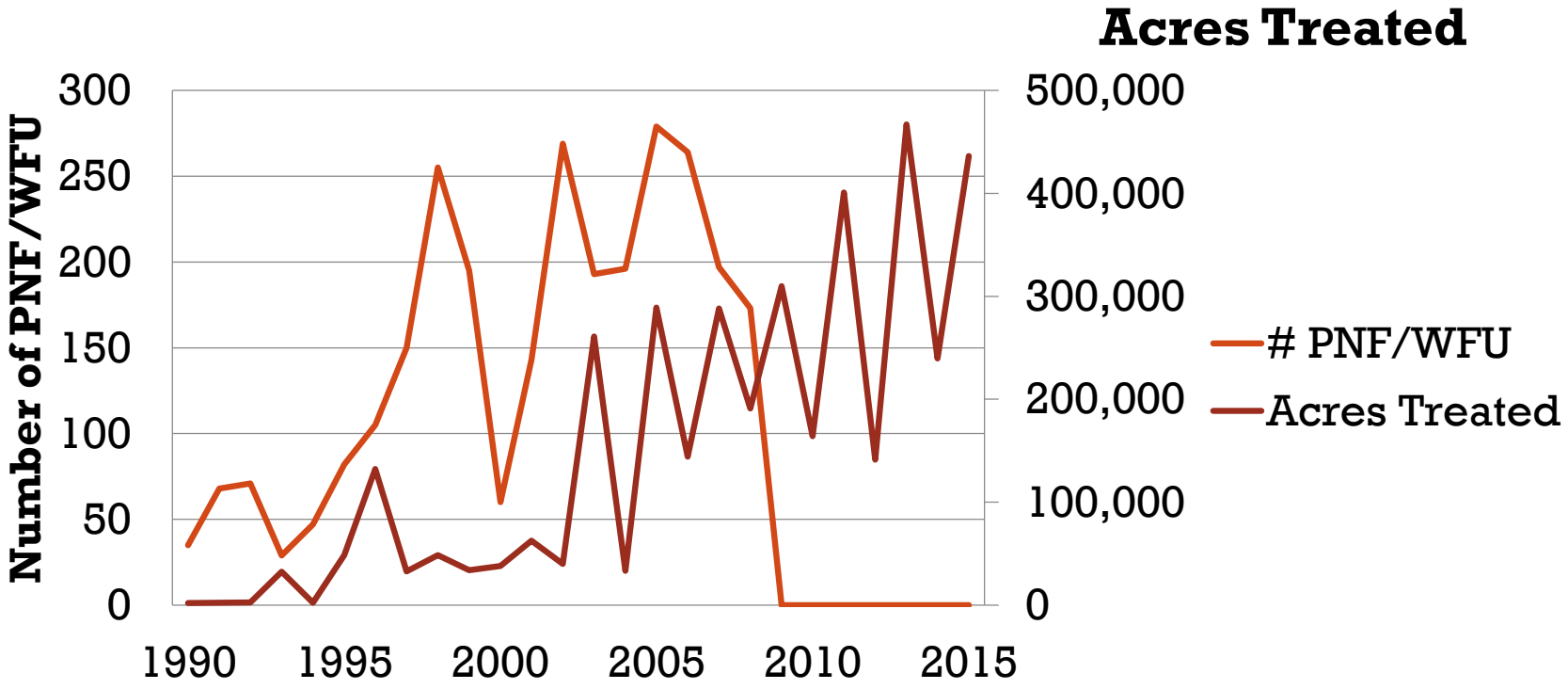
WILLIAMS, Arizona – The fires being managed for resource benefit on the Kaibab National Forest and the North Rim of Grand Canyon National Park in Arizona are growing slowly but steadily as weather conditions vary on a daily basis.







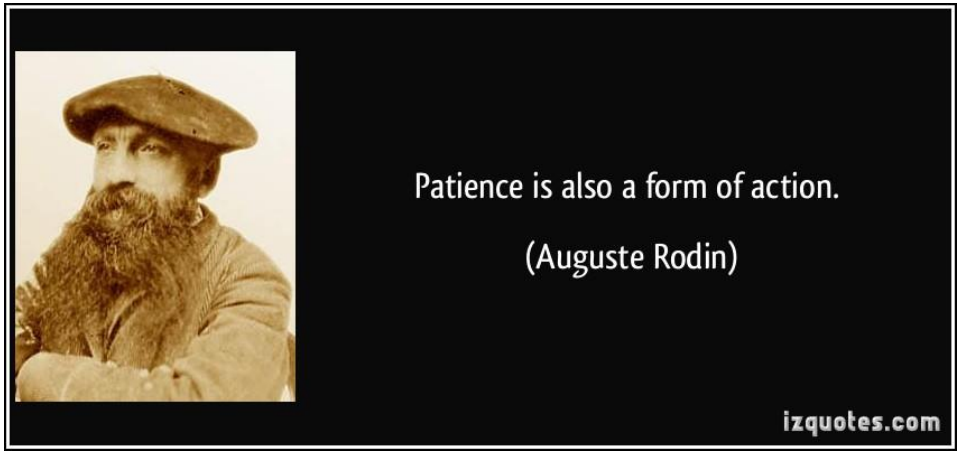
USFS FIRE USE TRENDS



*1972 to 1989: Avg. 9 PNF for 12,223 acres annually
1972 to 2015: Total Acres Treated = **4,064,155**

MOST IMPORTANT LESSONS WILDERNESS FIRE MANAGEMENT HAS TAUGHT US

1. Fire Can Be a Good Thing
2. Plan Ahead So You Don't Fall Behind
3. Patience – Sometimes It's OK to Go Slow



WHAT WE THINK WE KNOW ABOUT WILDLAND FIRE MANAGEMENT TODAY:

- Wildfire is and will be the single-most influential change agent affecting our National Forests & Grasslands.
- Climates are trending toward hotter & drier, so more extreme burning conditions will become more common.
- A strict suppression policy does not reduce fire's impact on forests, but rather pre-disposes them to burning under the most extreme conditions causing greater impacts and longer periods to recover.
- To lessen the magnitude of the impacts from fire during the most extreme years, we want to permit more change & recovery to occur outside of those most extreme conditions.
- To do so, we need to prepare our landscapes, communities and responders to be able to accept more regular, recurring doses of fire.

SIGNS OF WHERE WE ARE AT IN THE USFS

- 2015, Bald Knob, Pisgah NF, SC
  - Eastern US Using Wildfire to Achieve Better Outcomes
- 2014, Slide & San Juan Fires, AZ
  - Full Suppression Fires with a Fire Use Ethic
- 2016, North Fire, Cibola NF, NM
  - 11 % High Severity
  - Chief & Regional Forester Visit

CHALLENGES FOR WILDERNESS FIRE MANAGEMENT – A NATIONAL PERSPECTIVE

- Small Wilderness Areas and Loss of the "middle ground"
- Climate Change
- Wilderness Idealism (conserve, protect from change) versus Wilderness Fire Reality (natural fire = rapid, dramatic change)
- Dilemma of Passive vs Active Engagement
- Terminology: If putting all or a portion of a fire out is called "suppression" what do we call not putting it out?