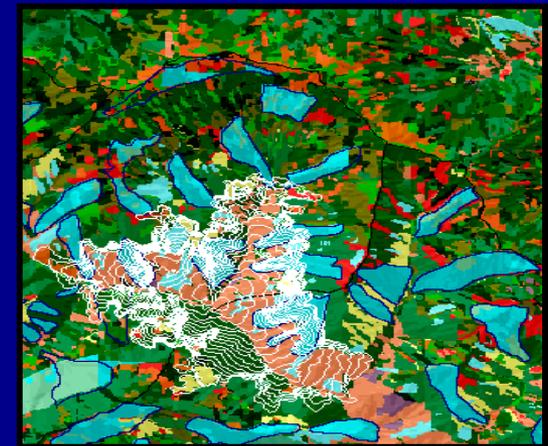




# Landscape Planning for fire and fuel issues on National Forests in California



**We Know What To Do...  
So Why Can't We Get It Done?**

**Donald Yasuda**

**Wildlife Biologist, Strategic Decision Support Cadre  
USDA Forest Service, Pacific Southwest Region**

**Sierra Nevada Fire History  
Fires 1900 - 1979**

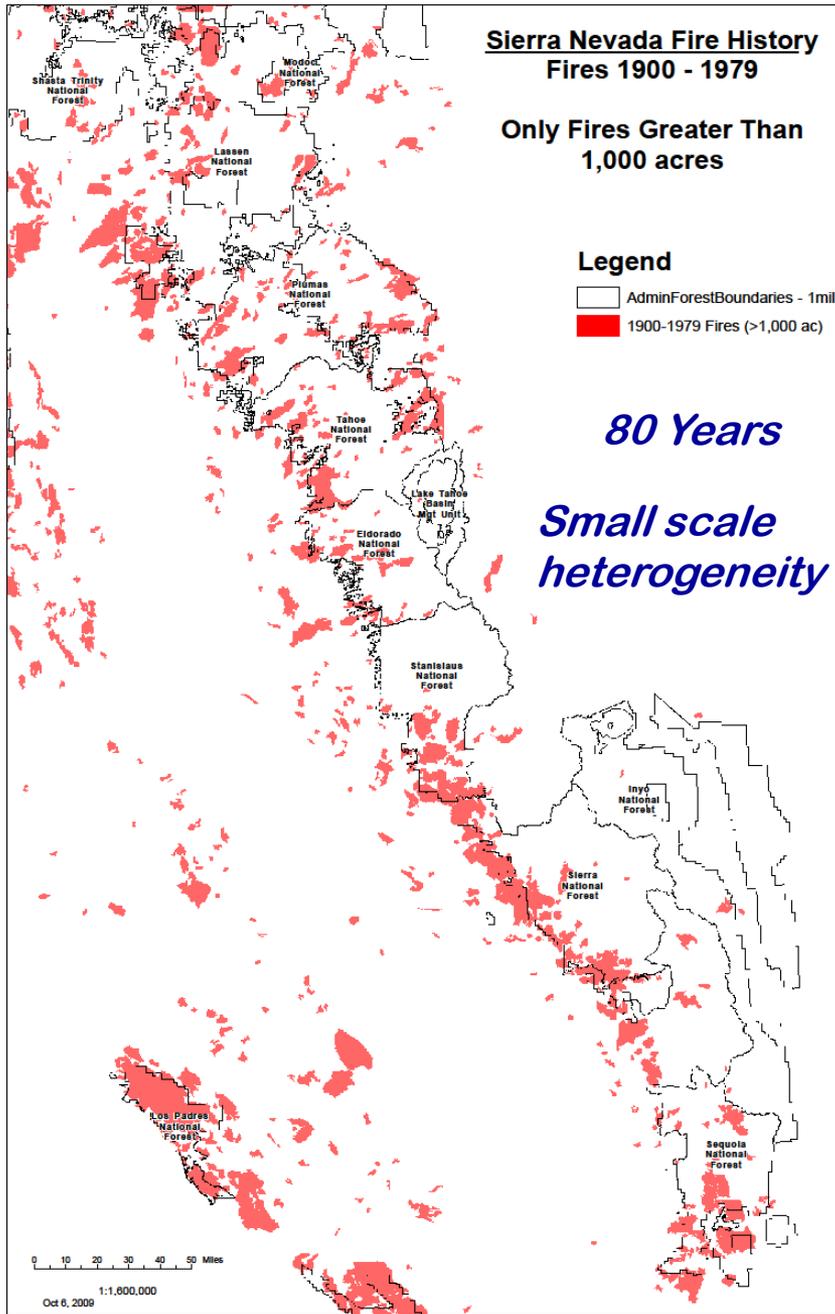
**Only Fires Greater Than  
1,000 acres**

**Legend**

- AdminForestBoundaries - 1mil
- 1900-1979 Fires (>1,000 ac)

*80 Years*

*Small scale  
heterogeneity*



**Sierra Nevada Fire History  
Fires 1980 - 2008**

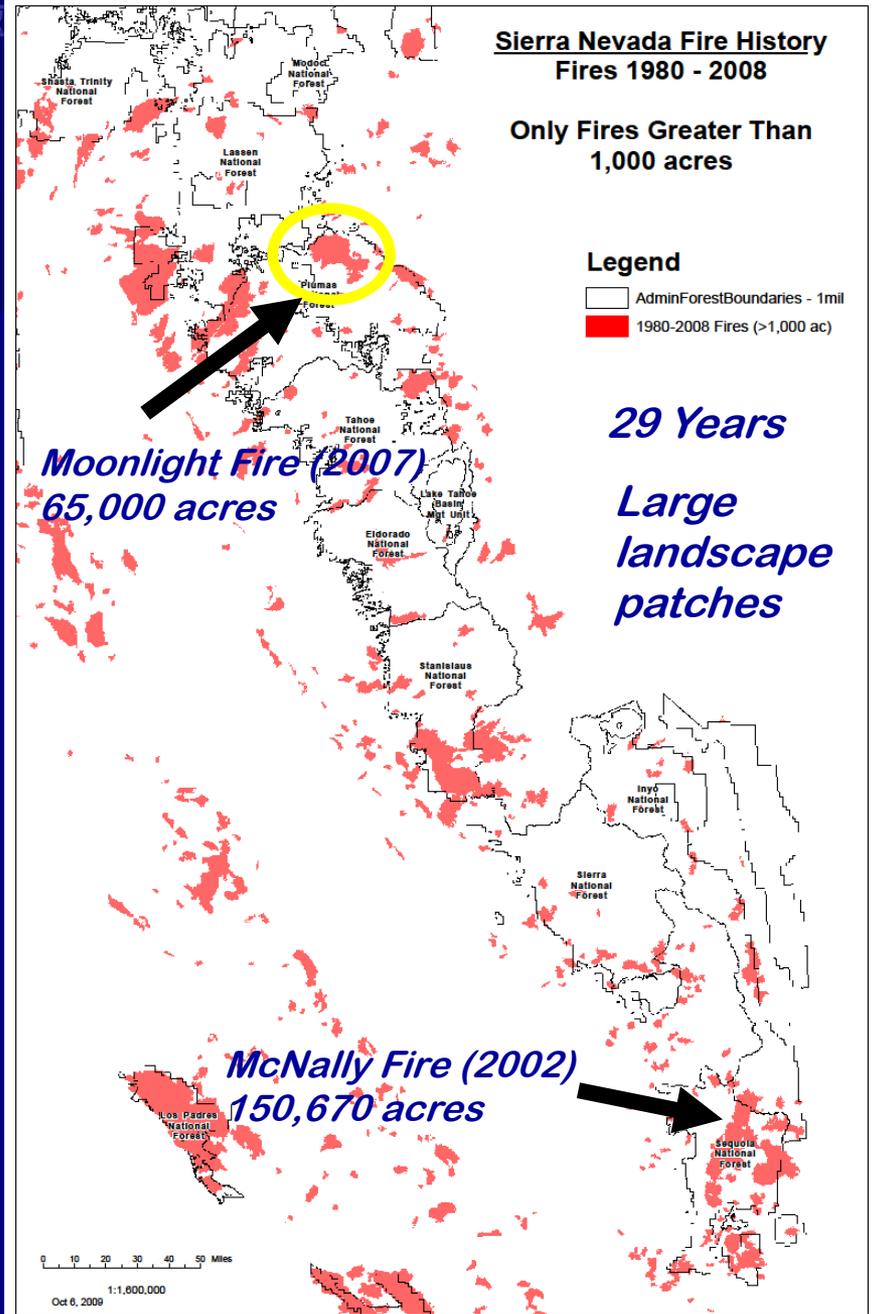
**Only Fires Greater Than  
1,000 acres**

**Legend**

- AdminForestBoundaries - 1mil
- 1980-2008 Fires (>1,000 ac)

*29 Years*

*Large  
landscape  
patches*





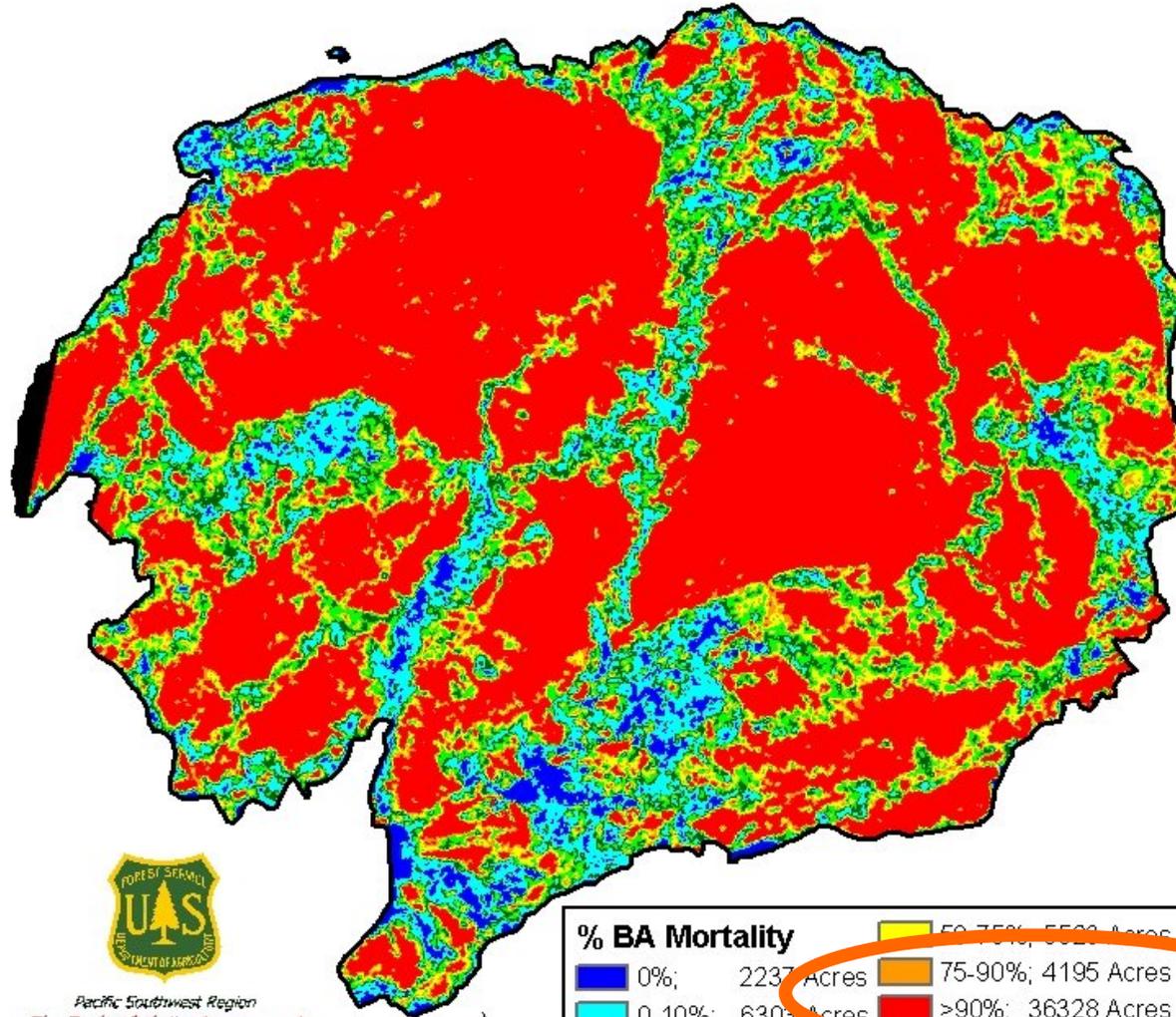
# Moonlight Fire, Plumas NF (2007)



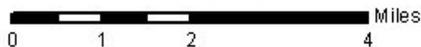
**NASA Earth Observatory (MODIS Aqua) image, Sept 5, 2007. Two day old fire is ~28,000 acres**



## Moonlight Fire 2007 - Plumas National Forest



Pacific Southwest Region  
Fire, Fuels & Aviation Management



% BA Mortality	
0-10%; 6305 Acres	50-75%; 5500 Acres
10-25%; 4774 Acres	75-90%; 4195 Acres
25-50%; 5879 Acres	>90%; 36328 Acres
	Unmapped; 200 Acres

The problem isn't that every fire burns at high severity. It's that we are getting some very large fires that are burning large blocks of contiguous acres) at high severity.



# The “Problem(s) to Solve”

- Reduce extent of high severity in large wildfires
  - Reduce threats to WUI
  - Reduce loss of hard to replace old forest habitats
- There are other non-Fire “Problems” to solve as well
  - Restore aquatic ecosystems
  - Manage noxious weeds
  - Restore hardwood ecosystems
- Goal: Through land management, change the outcome of large wildfires over the next 20 years.



# Adopting a Landscape Fuel Treatment Strategy

- **Sierra Nevada “Framework” – Bioregional Forest Plan amendment - 2001 FEIS Strategy**
  - “Spanish moss” strategy of WUI treatments in Defense and Threat Zones and upper 2/3 of south and west facing slopes
- **Broad environmental group “support” for 2001 Framework**
  - Generally limited tree harvest to <12” trees with some allowance of up to 20” trees. No trees > 30” dbh.
  - Large areas of limited active management (Old Forest Emphasis Areas and areas managed for CA spotted owl and Pacific fisher and other species)

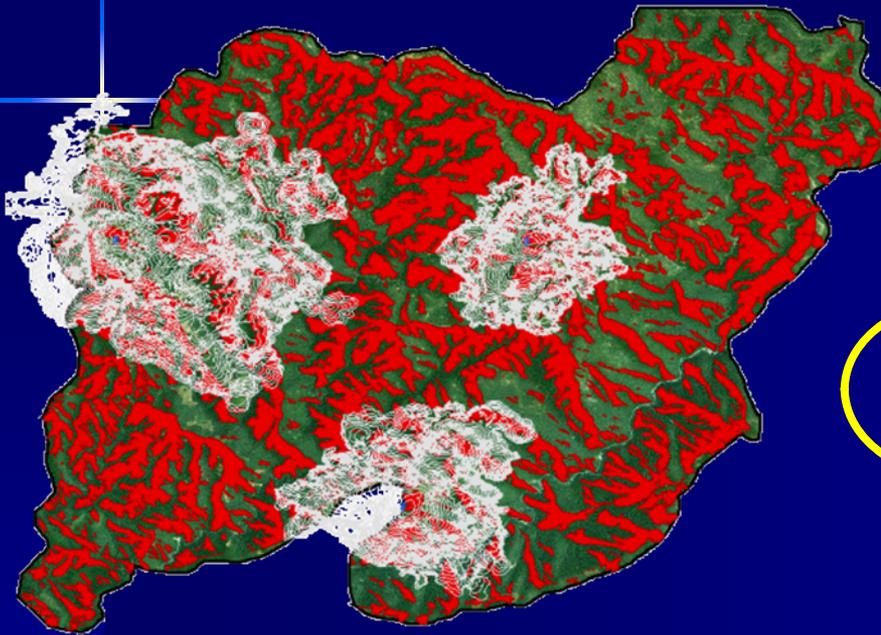


# Why the Need for Change?

- **Limited ability to actually implement the Strategy**
  - Cost prohibitive to treat large areas given limitations
  - Overlapping standards and guidelines
  - Precautionary Principle weighted heavily
- **2004 SEIS Strategy**
  - Strategic placement of area treatments (SPLATs) combined with WUI Defense and Threat Zones
  - More flexibility to locally define fuel treatment objectives and set locally appropriate treatment prescriptions. Thinning from below. No trees > 30” dbh.



# Sierra Nevada Strategies Example



**2001** – “Spanish Moss” – upper 2/3, south- and west-facing slopes.  
*BUT* with substantial “corrosion” = limited treatments in Home Range Core Area and Old Forest Emphasis Area – not mapped



**2004** – “SPLATS” – overlapping “speed bumps” oriented to “problem fire” wind direction(s)  
*BUT* with some “corrosion” = avoid treatments in Protected Activity Centers mapped



## What was the “Cost” of 2004 SEIS?

- Antagonized environmental groups and others
  - Rhetoric of “tripling the cut”
  - Appeals and Litigation
- Cumulative loss of internal and external infrastructure
- Feeds “analysis paralysis”



# A Strategic Planning Approach – Stewardship and Fireshed Assessment

## ■ Integrated, collaborative “problem-solving” approach

- An interdisciplinary, interactive, and collaborative
- **rapid, real-time** assessment
- conducted at a landscape scale
- to design landscape strategies and implementation scenarios
- that addresses multiple objectives
- and leads to prioritized program of work scheduling
- in an adaptive feedback system



*Active Learning*



# Stewardship and Fireshed Assessment

- **Regional “Cadre” of specialists**
  - **Wildlife, Fuels, Silviculture, Recreation, Analyst, and GIS support**
  - **Work with Researchers (Missoula Fire Lab, PSW and PNW Research Stations, UC Santa Barbara Geography Lab, Western Wildland Env. Threat Assessment Center, and others)**
  - **Work with Others (Fire Safe Councils, Federal, State and local agencies, The Nature Conservancy, key environmental groups, key industry groups, local community leaders, and others)**
  - **Work with Forests to teach the SFA approach and coach them in using it**



# The SFA Process

(short version – using a fire example)

- Take map of forest and identify “problem fires” that could burn and affect resources of value
- Identify a course-scale strategy to manage fuels to change problem fire outcomes
- Identify course-scale challenges to treatments and find workable solutions
- Use computer simulations to game out scenarios and evaluate outcomes
- Learn what “worked” and what “didn’t work” and make adjustments in assumptions or tactics or strategy or expectations and TRY AGAIN



# So What's Different?

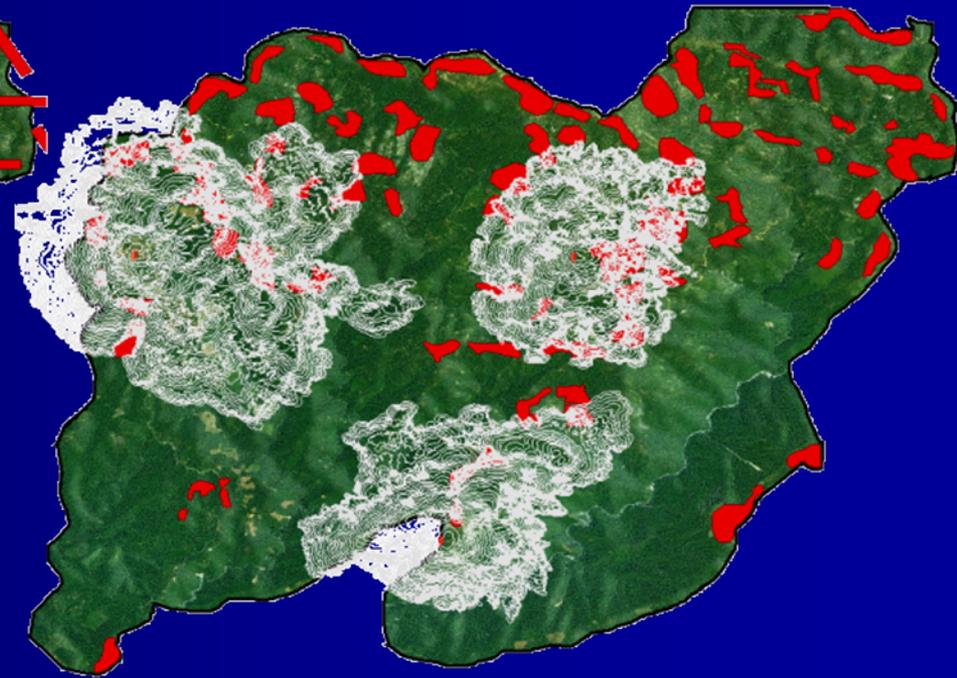
- Everyone's ideas gets Air Time
- Group (collaborative) learning instead of everyone vs. government
- Forces recognition of unstated assumptions and expected values
- Forces recognition of the limits of "Science"
- Finding "better" solutions rather than the "perfect" solution
- Forces group solutions to a common problem rather than individual solutions to "their" problem



# 25% of the Way There ! (Or rather 5 of 20 years have gone by)



*What the Strategy  
was designed to do*



*What actually  
happens (example)*



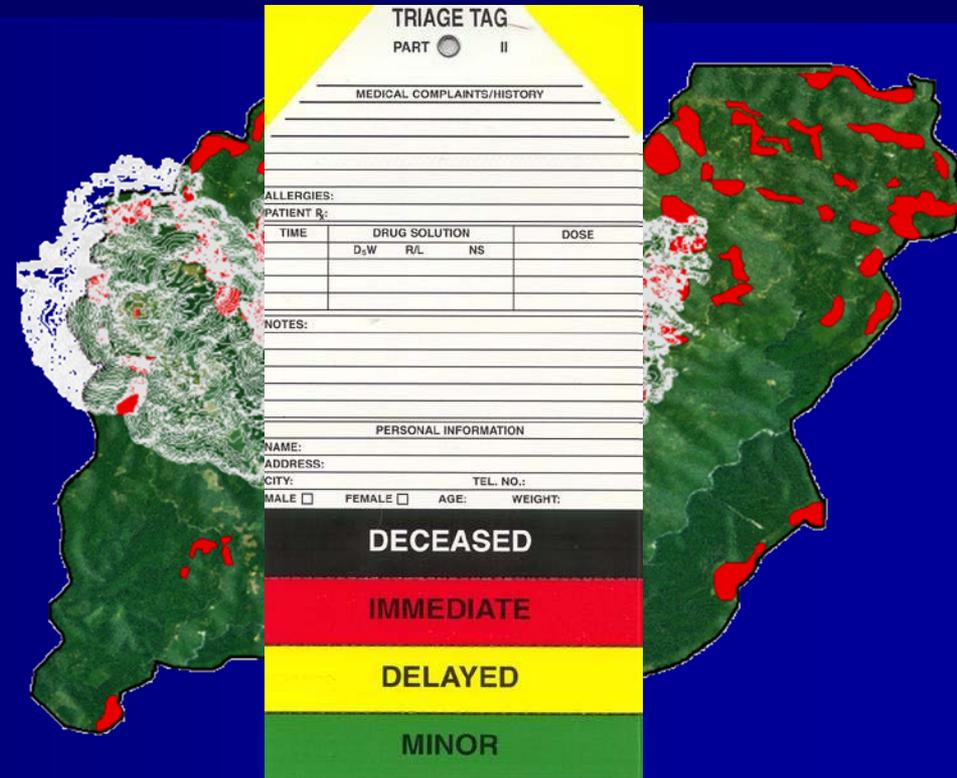
# Coulda / Woulda / Shoulda So Why Didn't It Work ???

- We need more data or more studies to inform us
- Forests are Too Dense / Not Dense Enough
- Just treat around the houses to save them
- There's a low probability of it burning
- Just remove the small material to solve the fire problem
- Fuels reduction is just a guise for logging
- Fires are not getting larger and more severe
- If it gets too controversial, we can just drop the unit
- We'll use more prescribed fire and managed wildfire ignitions
- Just too busy to follow through – too many #1 priorities



# So What's really going on? (In my opinion...)

- Safe, Cheap and Easy
- Waste Disposal problem
- “Boutique” Forestry (Hull et al. 2004)
- It's ultimately about economics – (but we can't or won't talk about it)
- TRIAGE





# What's Next?

- **SFA Version 2.0**
  - If at first you don't succeed....
  - ... listen to Einstein and do something different!
  - Convinced a logical problem-solving approach can work
  - Top down approach versus bottom-up
  - Force issues to be addressed at appropriate scales (the right problem at the right scale)
  - “Third Party” that can speak the unspeakable



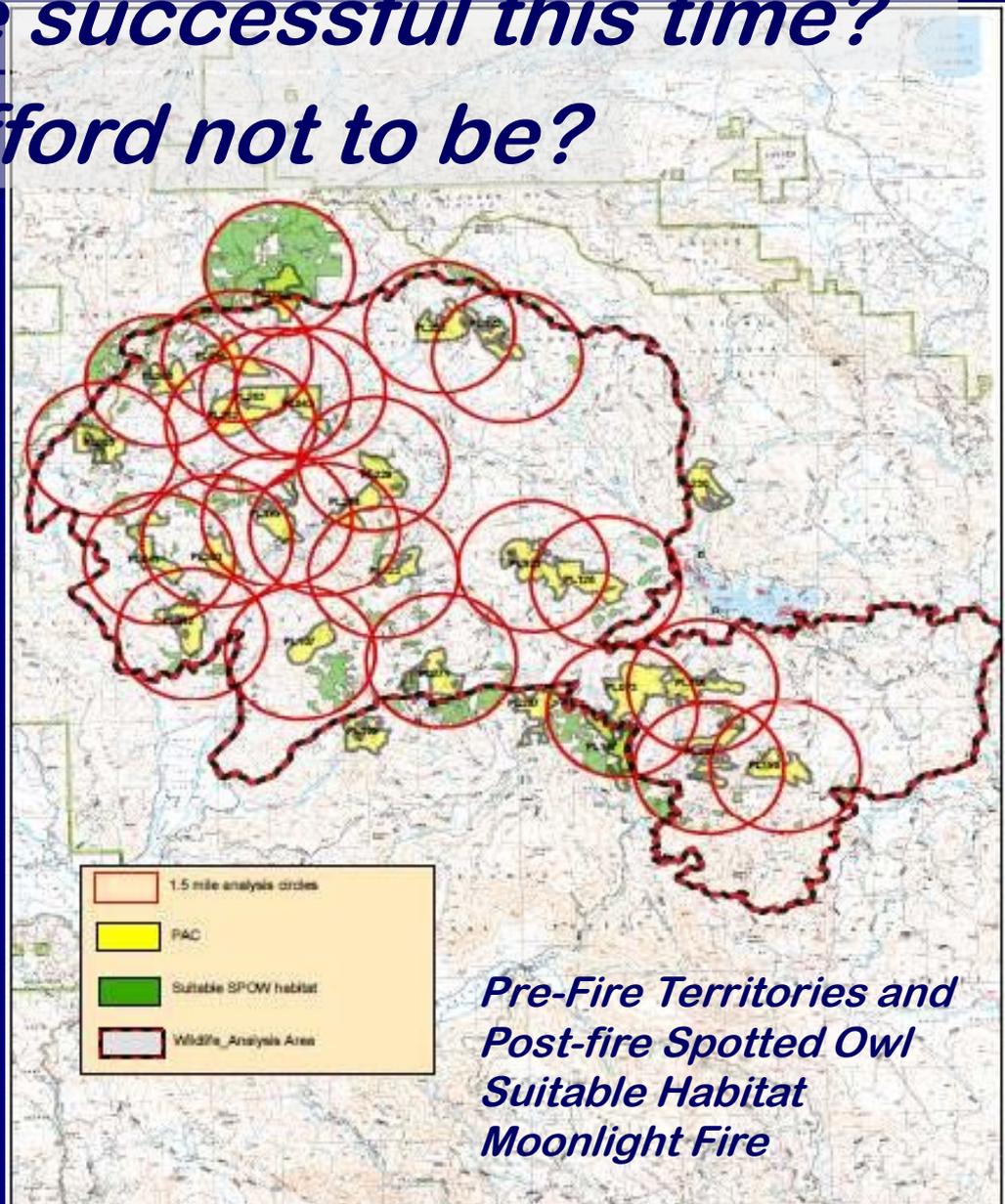
STRATEGIC DECISION SUPPORT  
STEWARDSHIP AND JURISDICTION ASSESSMENT PROCESS  
USDA FOREST SERVICE, PACIFIC SOUTHWEST REGION

*Will we be more successful this time?*





*Will we be more successful this time?  
Can we afford not to be?*





STRATEGIC DECISION SUPPORT  
STEWARDSHIP AND JURISDICTIONAL ASSESSMENT PROCESS  
USDA FOREST SERVICE, PACIFIC SOUTHWEST REGION

*Just like spotted owls, OGC and DOJ Attorneys also seem to preferentially select very large old trees!*

