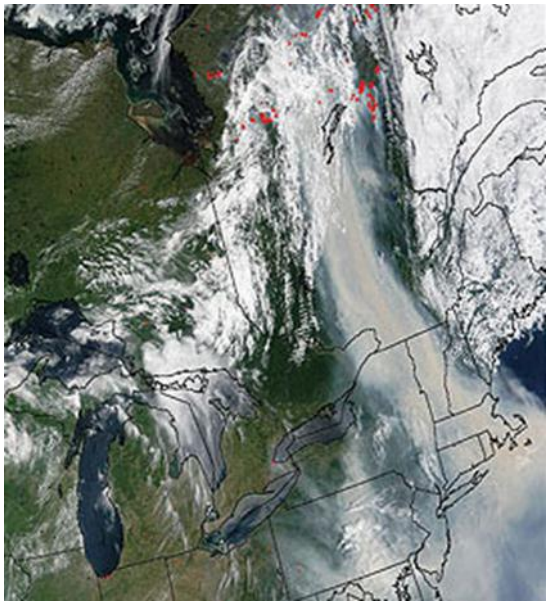
NE Compact Conference
Plymouth, Mass Aug 3 2011

Northeast Forest Fire Protection Compact: Stress-Testing Study



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1937: Wildfire in the …… area traps and kills 2 firefighters
1957: 15,000-acre fire jumps Route ZZZ in South ….. destroying
6 cottages and causing 150 residents to evacuate
1964: Wildfire blazes from ….. State Forest into…… burning 5,500 acres and 20 cottages
1971: 165-acre fire with 50-foot tall flames damages two fire engines
and injures 7 firefighters
1991: Fire along Route XXX burns 1,200 acres destroying 2 cottages and
a trailer
1995: 95-acre fire threatens more than 100 homes, causing residents to flee

Quiz: where did this happen?

MAINE FOREST FIRES THREATEN TOWNS

Fight to Keep Flames Back at Brooksville—One Summer Home Destroyed.

CATSKILL BLAZE UNCHECKED

Danger Also In the Adirondacks, Where Fires Are Spreading — Rains Check Wisconsin Fires.

New York Times Sept 18 1908

Are events like this just ancient history?

Maybe Not….

Photo on title p: Boston Globe July 2002

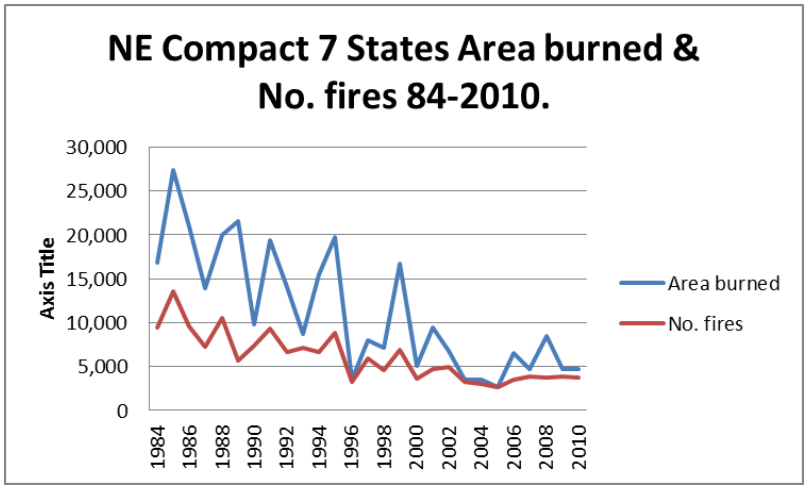
Contents

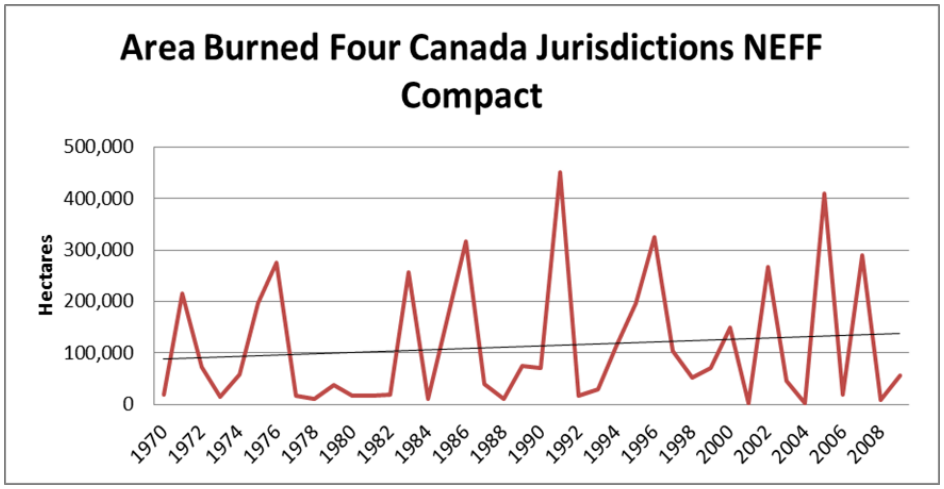
- Context
- Examples of Longrun Data Analysis
- Review of other Regions: Take-aways
- General Plan and Schedule
- Plan for early Outreach
- Key Messages so Far

Context

- Strategic & costly choices coming
- Public attention to extreme events:
  - Japan tsunami/nuclear disaster
  - South tornado outbreak
  - Texas Plains fire outbreak
  - Wallow Fire in Arizona
- Regionally, placid fire experience

Have we just been Lucky?

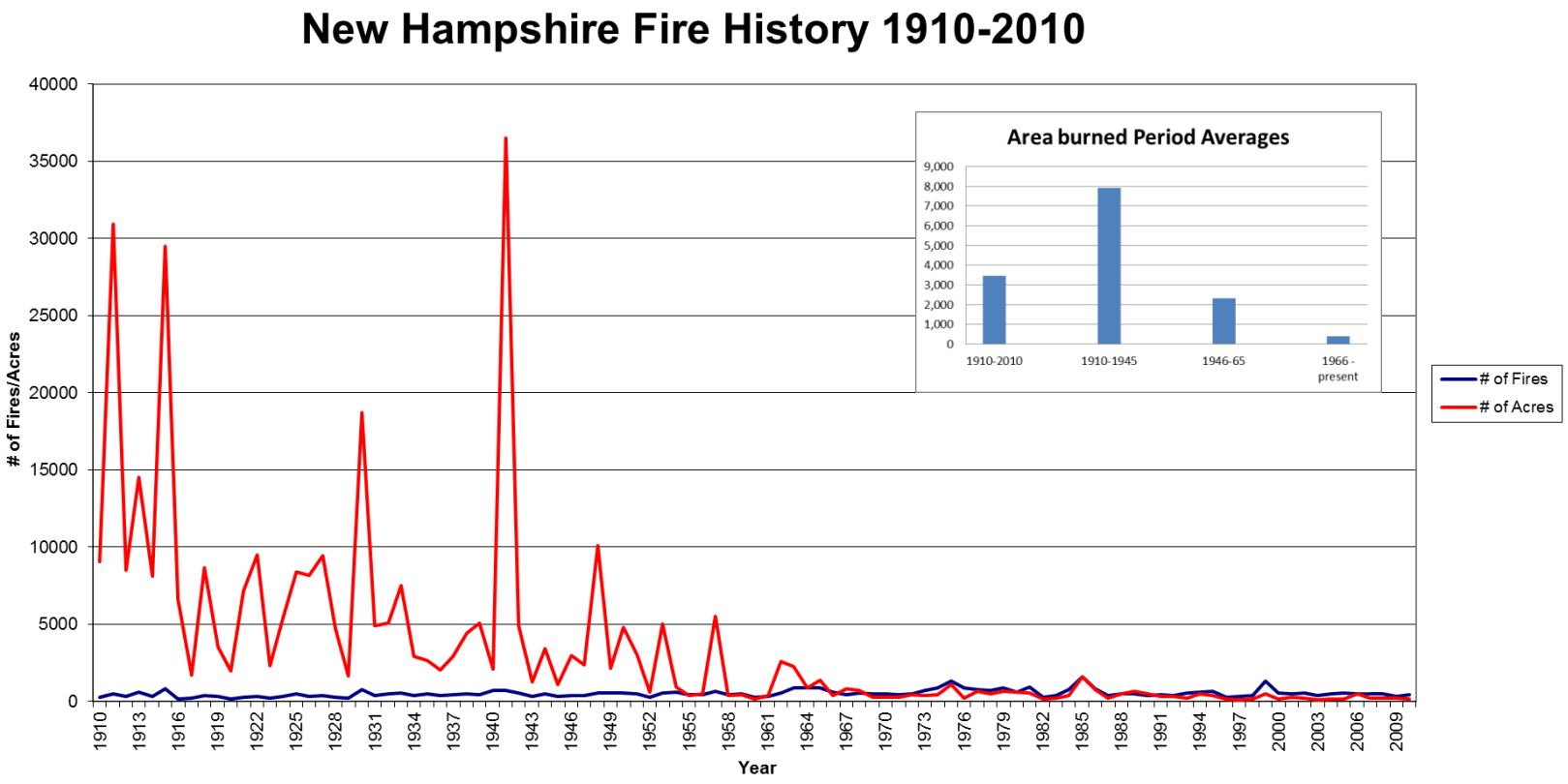




Note: preliminary summaries, there are loose ends in the data….

So -- do we have an “Asbestos forest”?

History & Stats: NH



Data tab courtesy of Karyn Cote, NH Forest Fire Control, DRED

New Hampshire's October 1947 Firestorm:

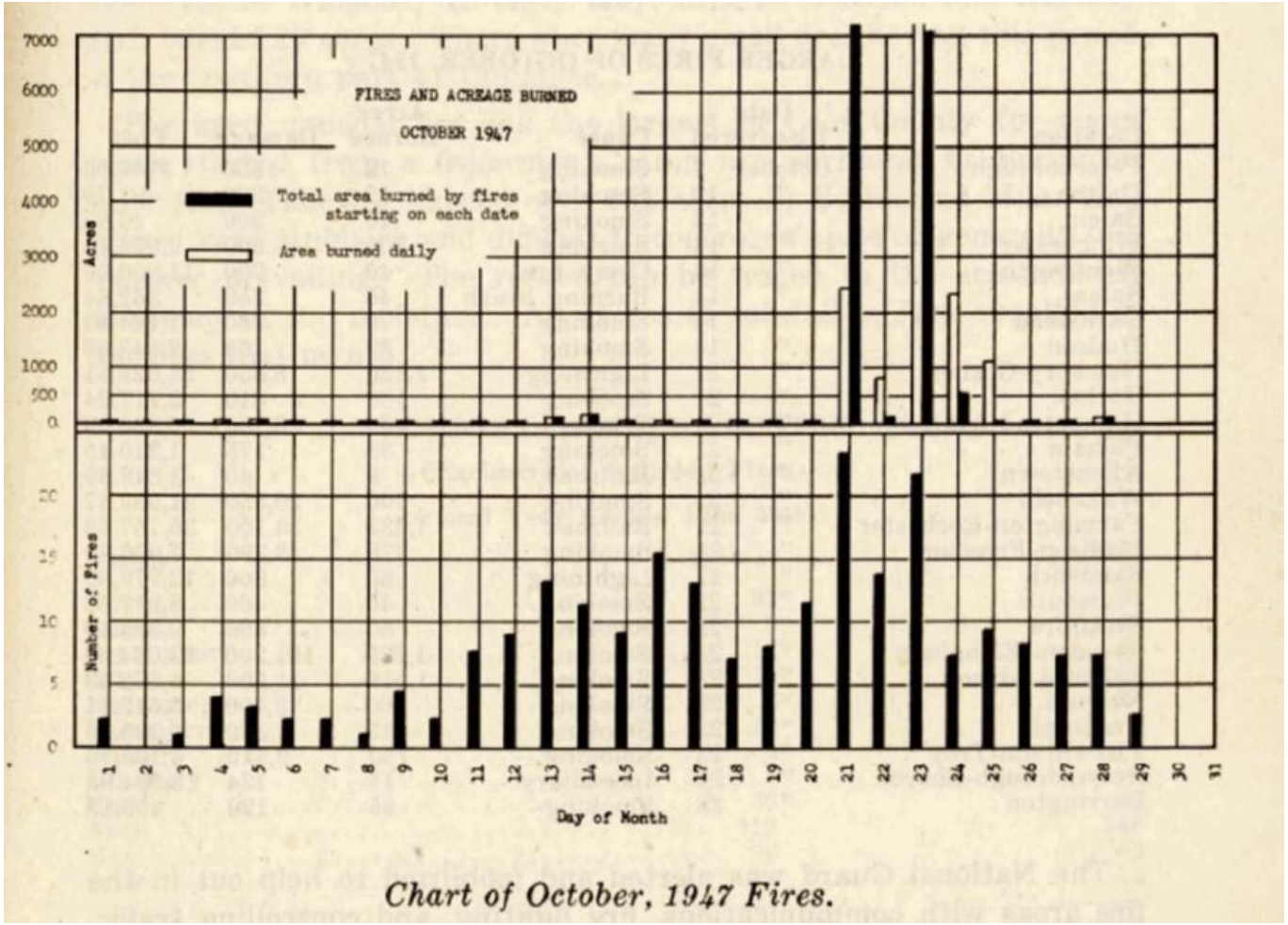
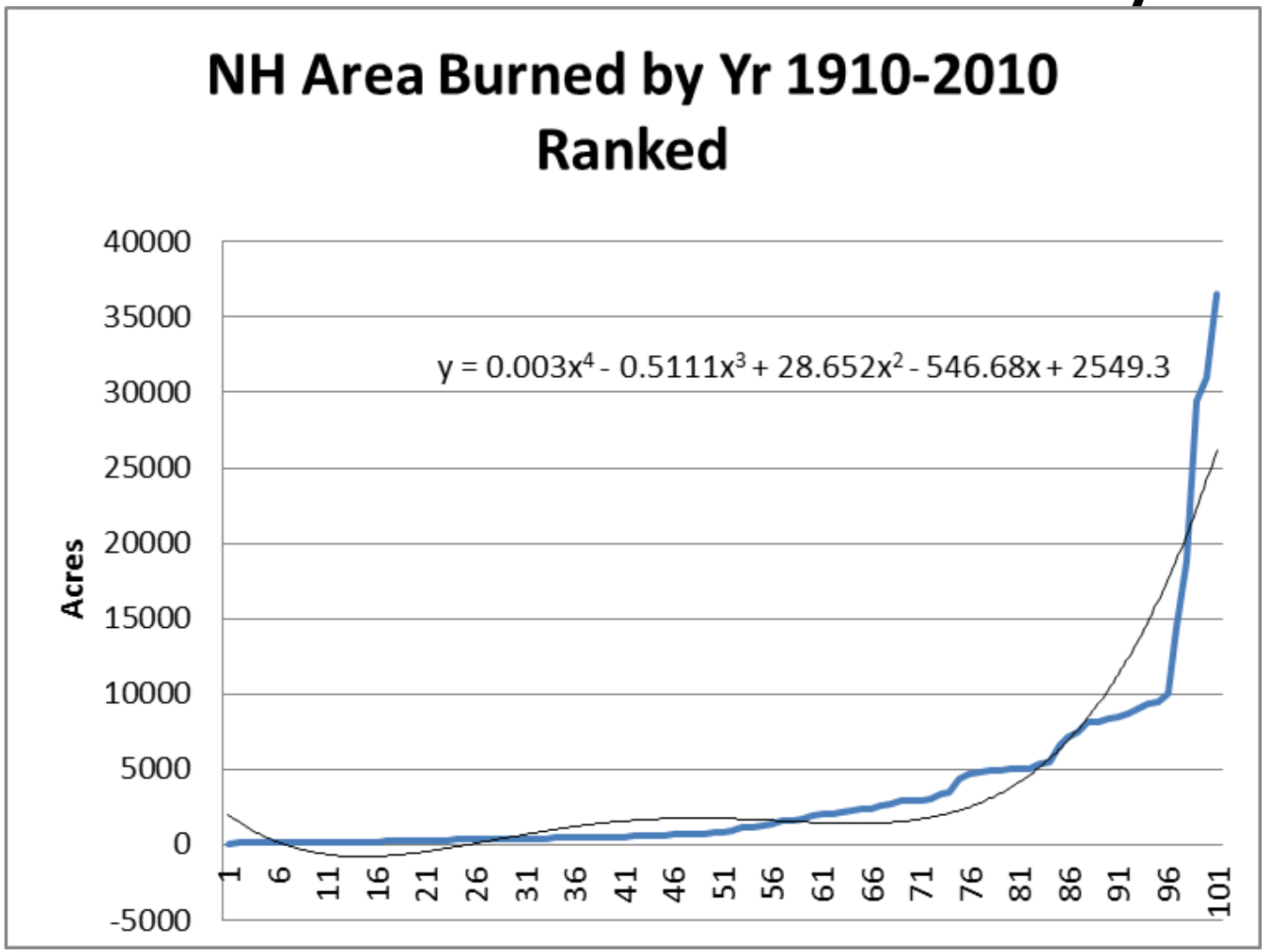
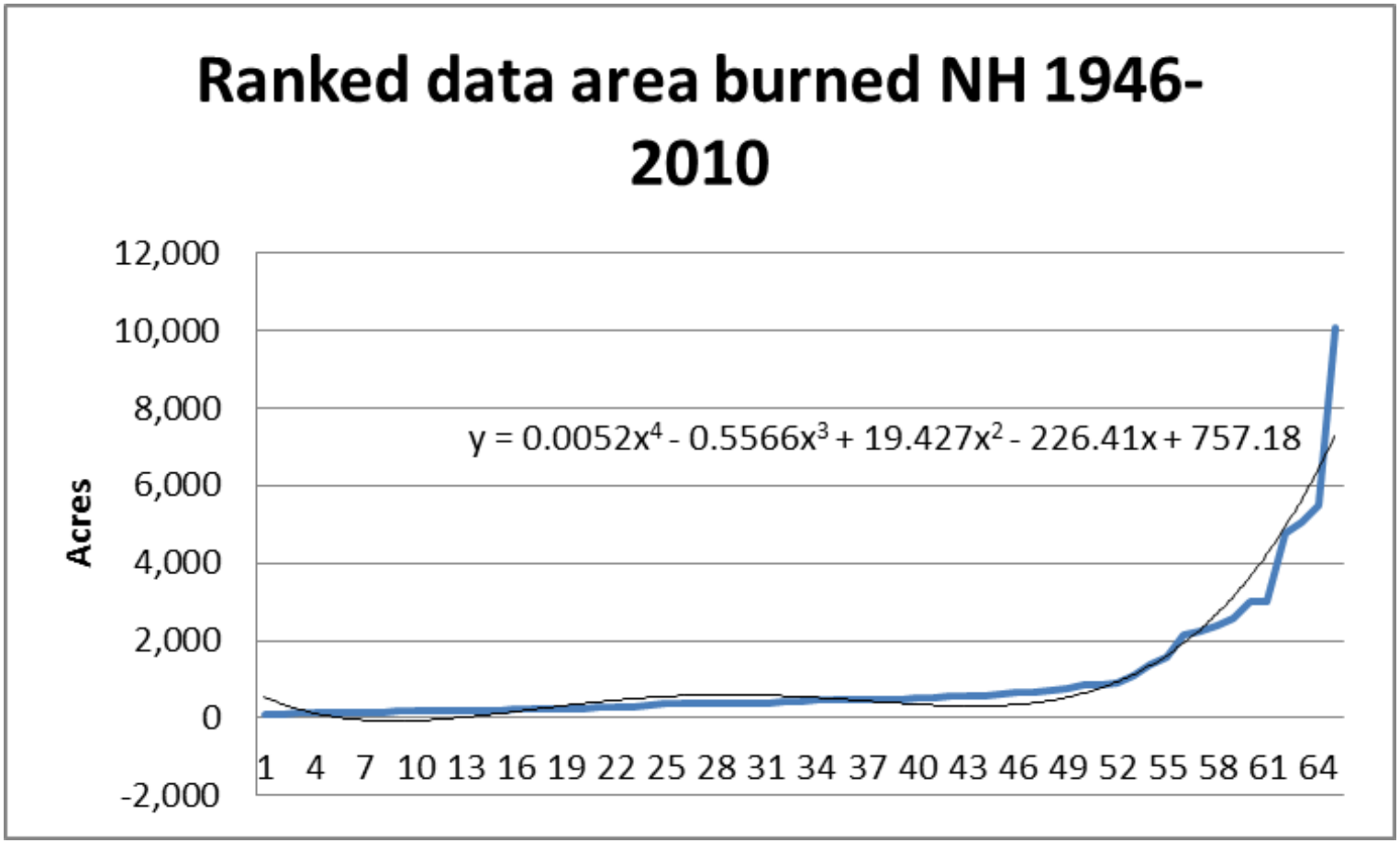


Chart of October, 1947 Fires.

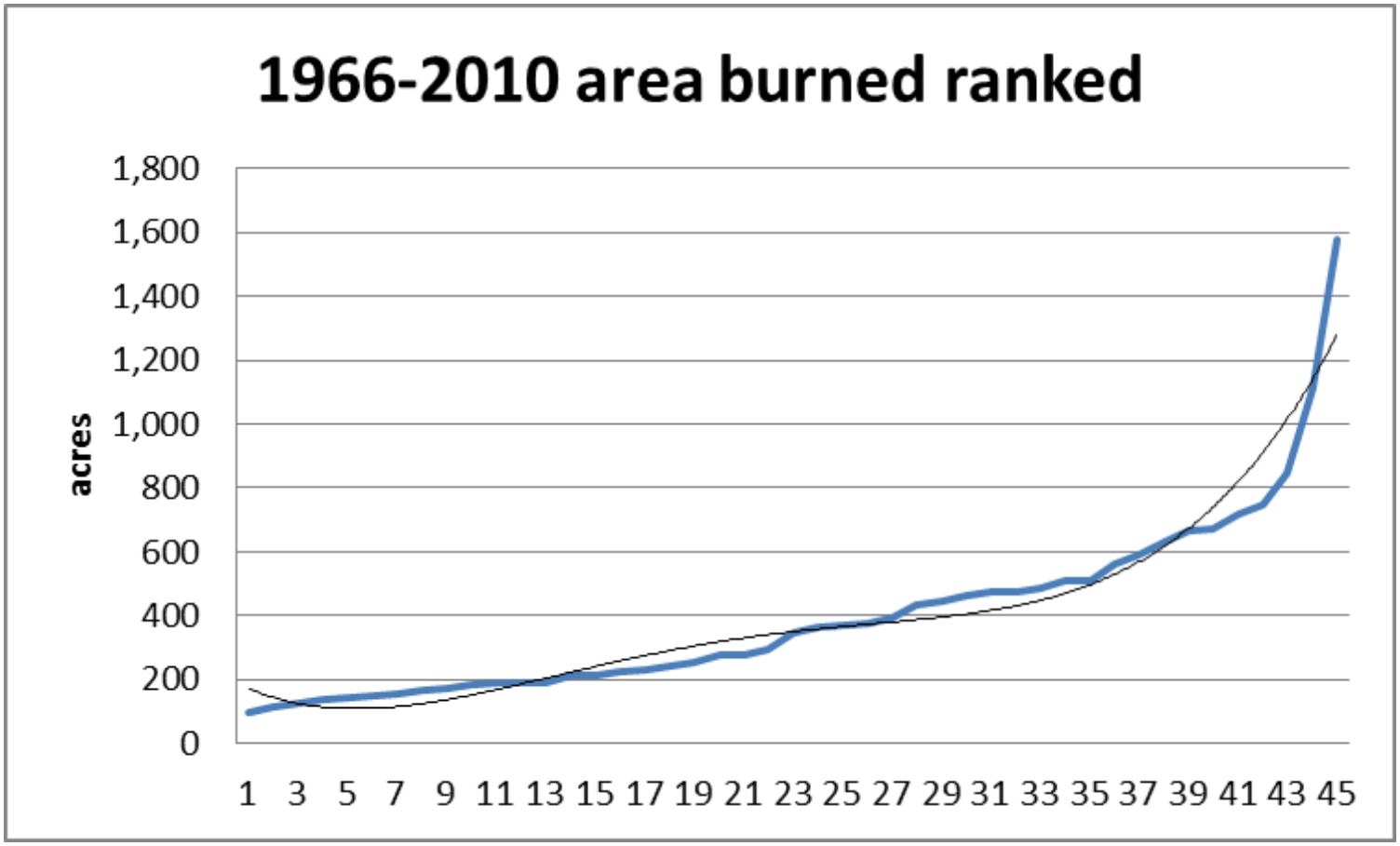
Initial Extreme Value Analysis



Well what if we omit older years…



Extr. Value theory: Next Biggest could easily be MUCH bigger than the "last Biggest"



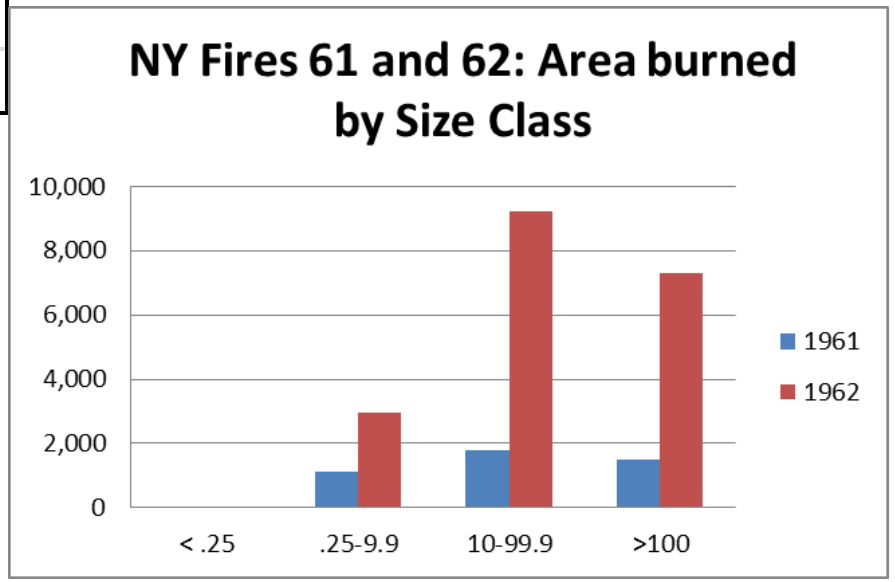
Extreme Value Analysis

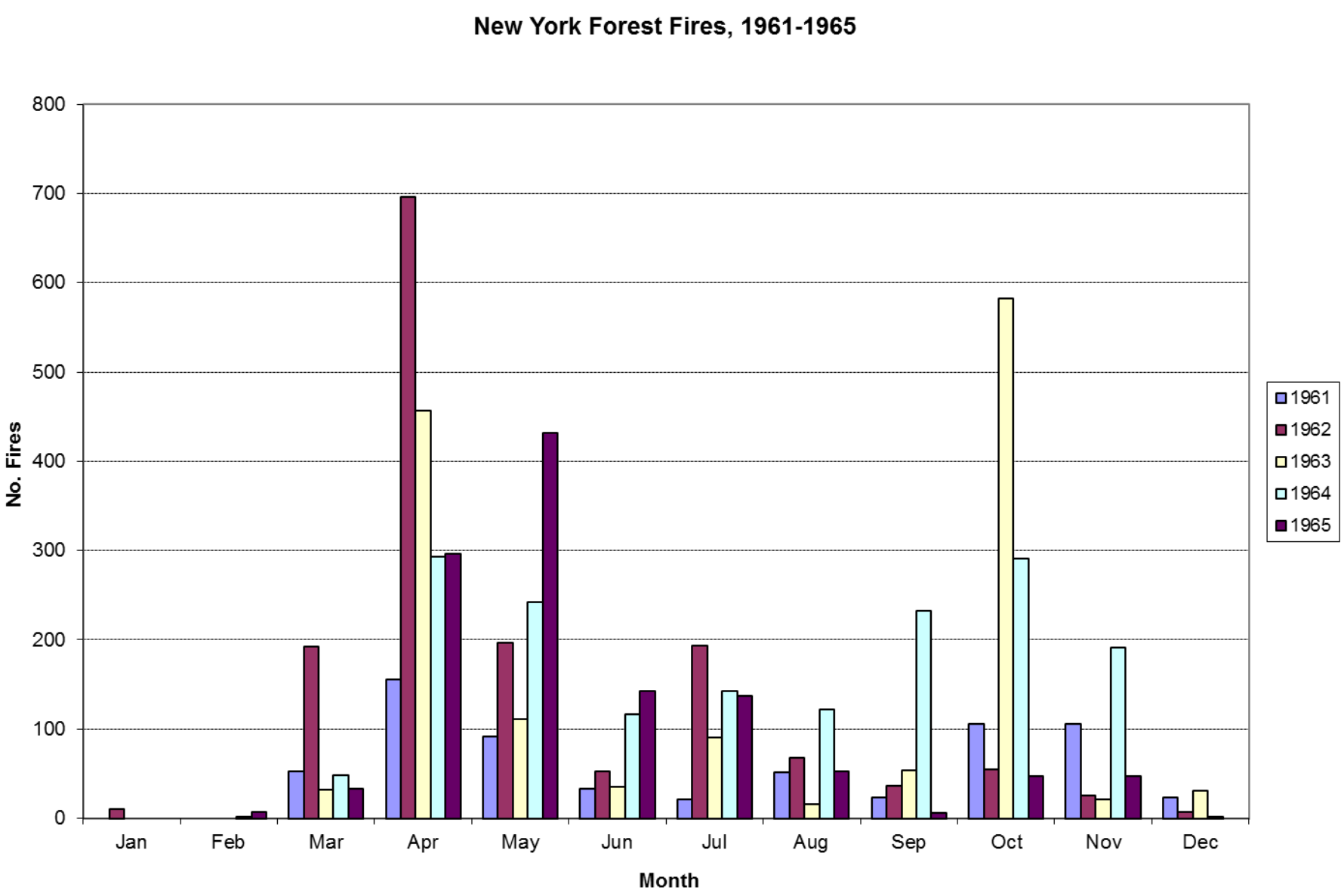
- Re-do for individual fires… sensible sample
- Associate with weather/fuel type
- Further analysis on resources and stress levels
  - Fires /day
  - Speed of spread
  - Other variables
  - Calls on Compact resources

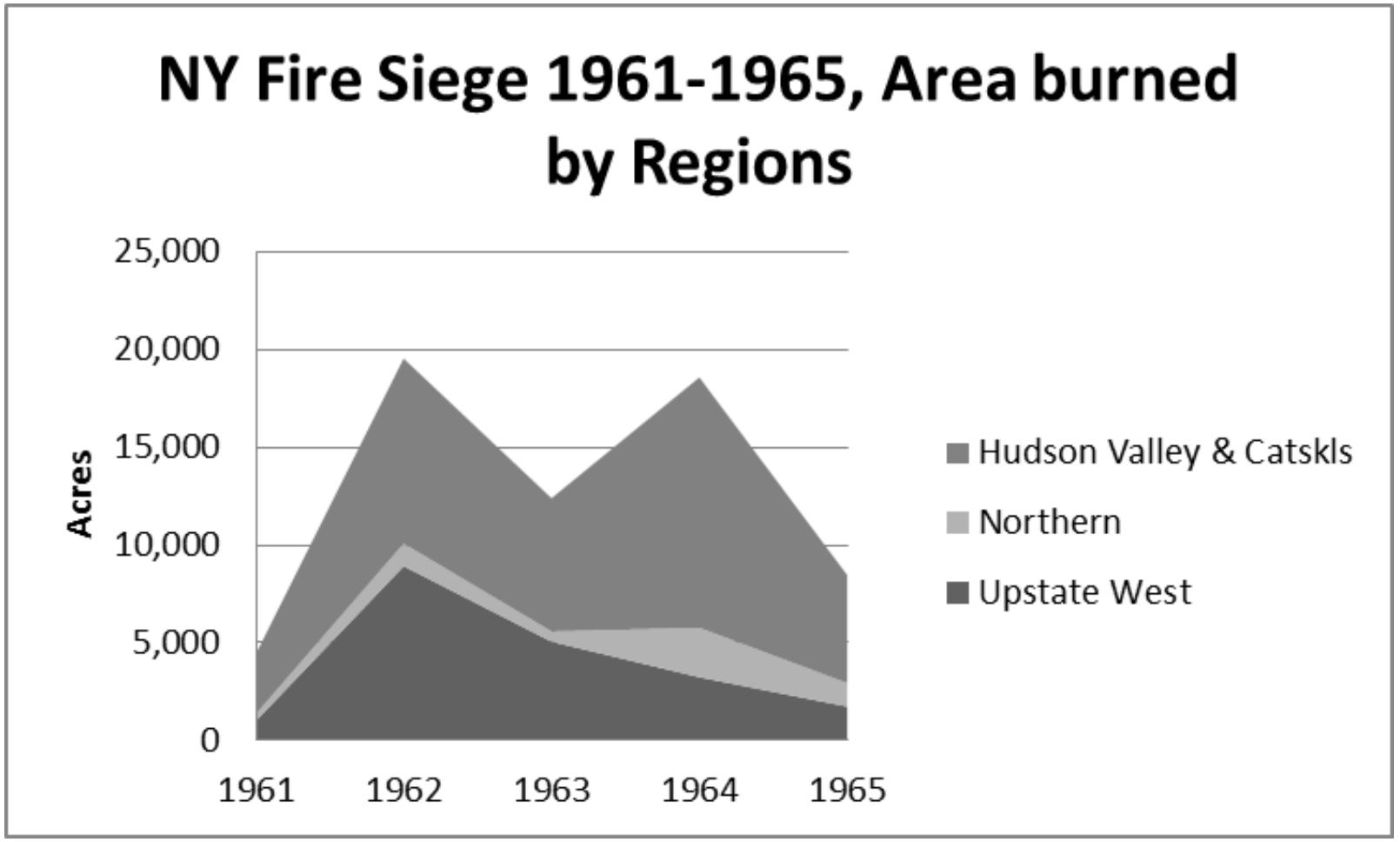
New York: Great Drought of '61-'65

No. Fires Statewide:			
		1961	1962
up to .25 A		167	230
.25-9.9 a.		430	986
10-99.9 a		63	287
100 a +		3	29
	Total	663	1,532

State Fire control annual reports.




New York Forest Fires, 1961-1965
800
700
600
500
400
300
200
100
0
No. Fires
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
1961
1962
1963
1964
1965


NY Fire Siege 1961-1965, Area burned by Regions
25,000
20,000
15,000
10,000
5,000
0
Acres
1961
1962
1963
1964
1965
Hudson Valley & Catskls
Northern
Upstate West

Observations

- Fires don’t always happen in fire season
- States are misleading geographic units for assessing risk/significance and assessing connections to weather
- ‘47 was a 100 yr plus weather event – does not mean it will never happen again.
- Was ‘61-65 a 50 yr event?
- How does modern weather data/forecasting change things?
- Do we have an asbestos forest?

Other Regions: Take-aways

- In highly flammable types, you do NOT need a drought to get a disaster
- In worst case, fires can explode in a day
- Even **Swamps** will burn (Okeefenokee)
- A single fire can far exceed previous annual totals
- Management challenges for “instant project fires” scary
- Postfire recriminations/$$$ squabbles also scary

Suggested Early Outreach

- Data now in hand enables useful picture to be shown of situation and issues
- State and Province local groups will be interested
  - Issue Important
  - Information hard to find
  - Reader interest high with extreme events in news
- Editors will love it
- Placing brief factual stories now will reach print/readers before Legislative sessions.
- Ghostwriting may be good approach

General Plan

- Somewhat behind schedule now:
  - Delays gathering basic data
  - Schedule is forgiving – will catch up
- Next Steps:
  - Glimpse at fuel trends
  - Analyzing daily fire microdata to assess “pain thresholds”
  - More detailed analysis of danger rating and weather data
  - Assess changes in fire seasons
  - Assess resource limits and how they are changing
  - You tell us : the worst fires. (handout)
- LCI to attend Nov Mega-fires Conference & Report back

Key Messages so far…

- There is no reason the next bad year could not be a multiple in area burned above recent averages
- There are no bad years, there are bad WEEKS.
- So, we need to analyze much more fire microdata
- Will involve you – the managers
- And
- The scientists

Smokey's hometown: Capitan, NM

Great to work with you, and thanks for your attention. Questions?

THE IRLAND GROUP
FORESTRY CONSULTANTS