

Wildfire

Smokey's Horror or Just Nature's Way?



This Thing Called Fire

Chemical Reaction of Oxygen and Fuel.

Needs heat – Wood ignites at 600 F.

Burns gas driven off by heat.

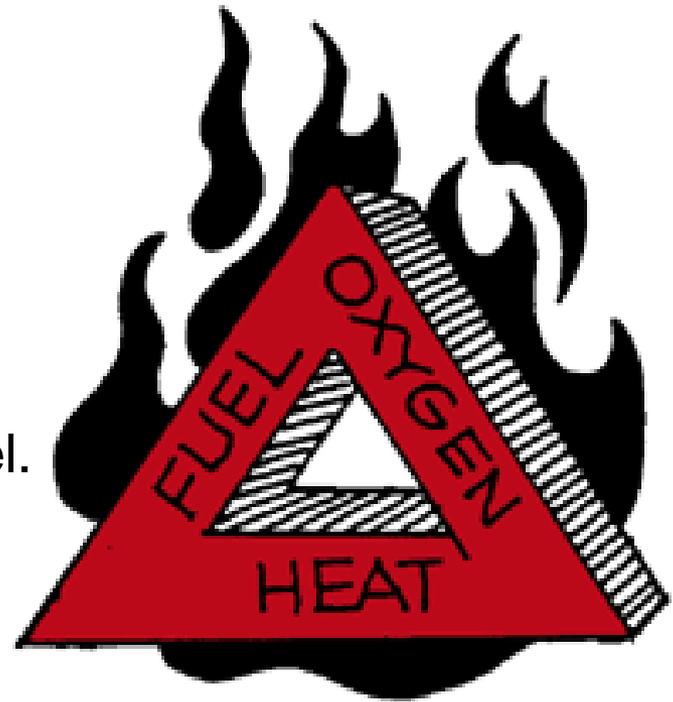


Fire Triangle

Take away just one leg to stop the fire.

Add water or dirt to cool flames.

Cut a fire break or burn out to deprive fuel.



Fire is a Natural Event

8,000,000 Lightning strikes per day.

Human cause majority of MN fires.

IN THE BIG PICTURE, fires do not hurt land, wildlife, or the ecosystem.



Ecosystem Benefits of Fire

- Allows disturbance dependant species (oaks, jack pine) to compete.
- Provides a seed bed.
- Converts decaying mater into available nutrients.
- Regularly reduces fuel load, avoiding giant fires.
- Provides unique habitats. (Kirkland's warbler, mountain meadows)



Fires Can Hurt

- Fires can hurt individuals and can destroy valuable resources.
- You would care about your house, not the ecosystem, when the fire is $\frac{1}{2}$ mile away.



Fire Control Policy

Made by humans to meet the needs of humans.

Hinckley fire - MN

Peshtigo fire – WI

Tilamook fire - OR

Fire Prevention and Fire Control as told by Smokey Bear met societal needs when fires were rampant and protection was nil.



Big Fires

6,400,000 acres burned in 2002.

2,500 times larger than SJ.

10,000 sq. miles

(A box from SJU east to WI border and then south to Iowa border.)



Big Fires

The US is a big country.
But 7 years like 2002 would burn over
the size of MN.

But not everything
inside the perimeter
burns!



Fire Control

- Analyze
 - Fuels & Weather
 - Access
 - Natural barriers
 - Fire size & Behavior
 - Values threatened
 - Available staff
 - Polices



Fire Control

Indirect Attack at a considerable distance from the fire.

- Use natural breaks, roads, and favorable terrain.
- Requires burn-outs



Prescribed Fire

Used as a tool in fire-dominated ecosystems.

- Restores natural processes and conditions.
- Prevents fuel build-up.



Prescribed Fire

Saint John's uses prescribed fire in the prairies, the oak savanna and the oak regeneration.



Prescribed Fire

- Does not always go as planned.
- Igniter responsible for all control costs.
- Hence term “prescribed” fire VS “controlled” fire



Wildfires Affect Policy and Vice-Versa

Wildfires have been larger and also more of a media event in recent years.



Fire Policy

- Fire control policies stem from 1890's.
- Natural burn policies were expanded in 1970's to allow natural processes and conditions to reestablish.



Wildfire Sizes and Costs

Year	Fires	Acres	Cost
2004	77,534	* 6,790,692	\$890,233,000
2003	85,943	4,918,088	\$1,326,138,000
2002	88,458	6,937,584	\$1,661,314,000
2001	84,079	3,555,138	\$917,800,000
2000	122,827	8,422,237	\$1,362,367,000
1999	93,702	5,661,976	\$523,468,000
1998	81,043	2,329,709	\$328,526,000
1997	89,517	3,672,616	\$256,000,000
1996	115,025	6,701,390	\$679,167,600
1995	130,019	2,315,730	\$340,050,000
1994	114,049	4,724,014	\$845,262,000
1993	97,031	2,310,420	
1992	103,830	2,457,665	
1991	116,953	2,237,714	
1990	122,763	5,452,874	
1989	121,714	3,261,732	
1988	154,573	7,398,889	

Fire Policy

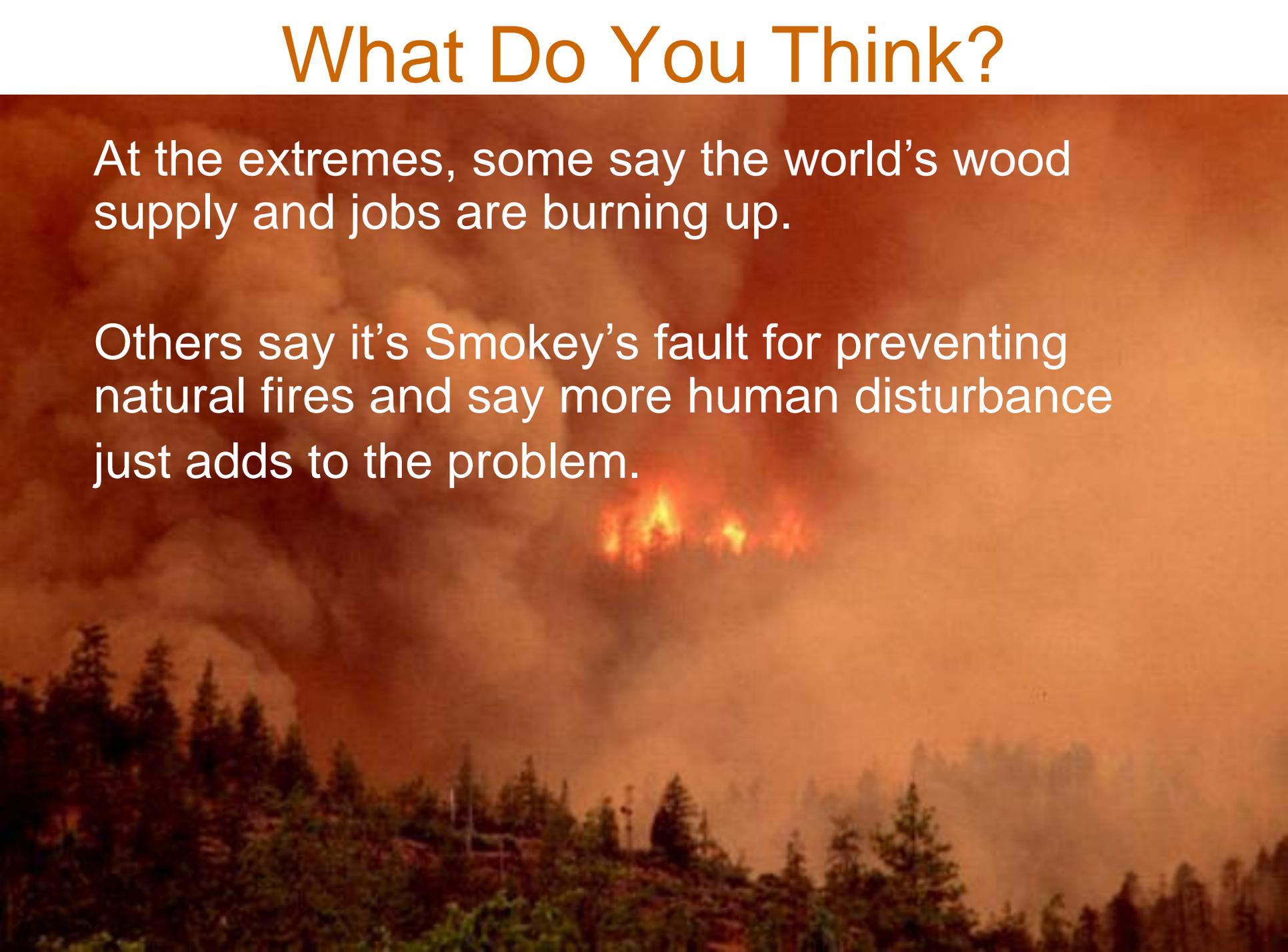
- **2003 Death toll in California fires: 22**
- **Homes destroyed: 3,600**



What Do You Think?

At the extremes, some say the world's wood supply and jobs are burning up.

Others say it's Smokey's fault for preventing natural fires and say more human disturbance just adds to the problem.



What Would You Do?

- What would you do if you were in charge of a forest?
- Burn naturally?
- Use Prescribed fire?
- Suppress fire?
- Limit housing?

What will be different in 10 years because of our policies?