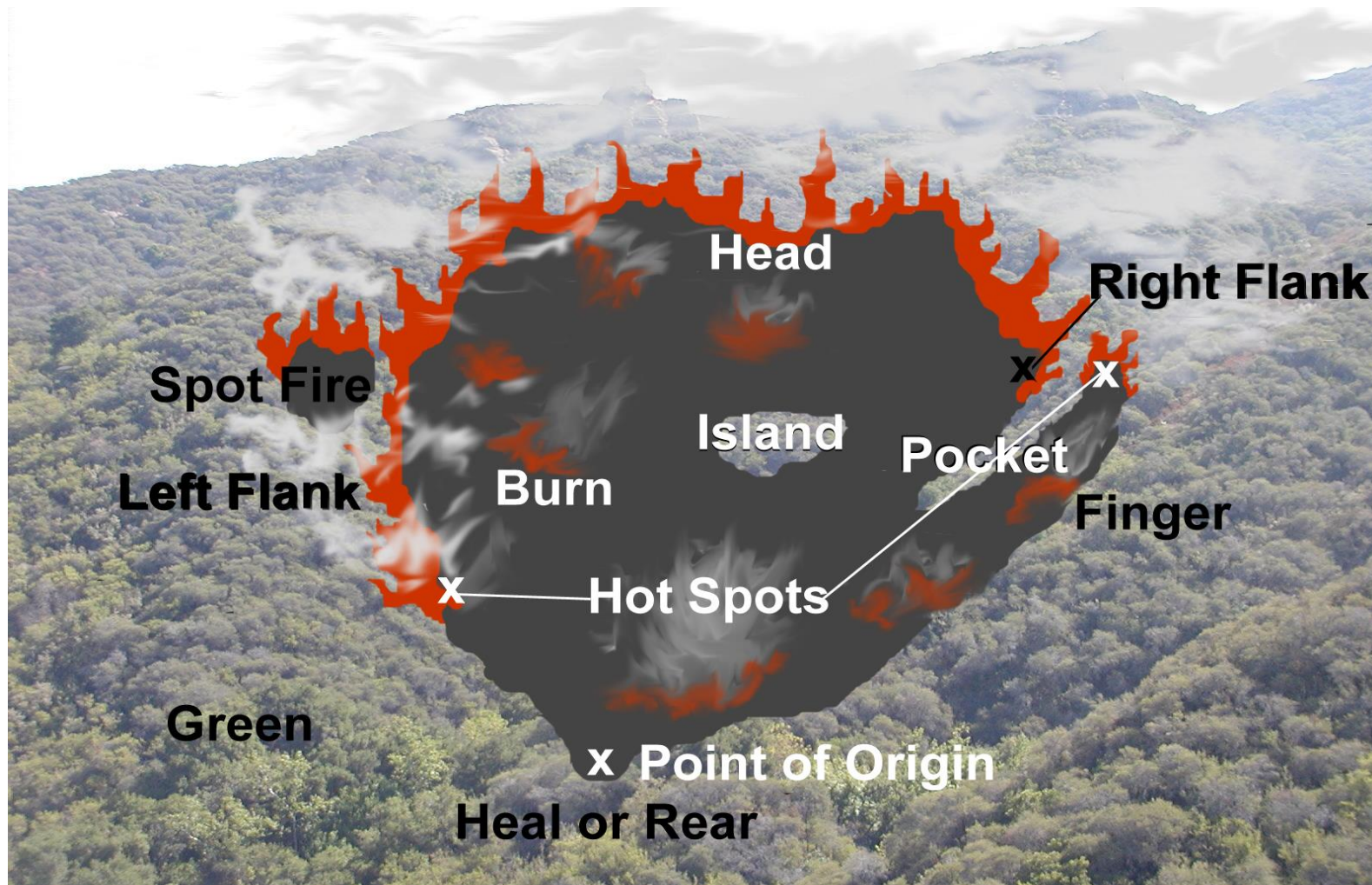




Wildland Fire Training for Commercial Growers

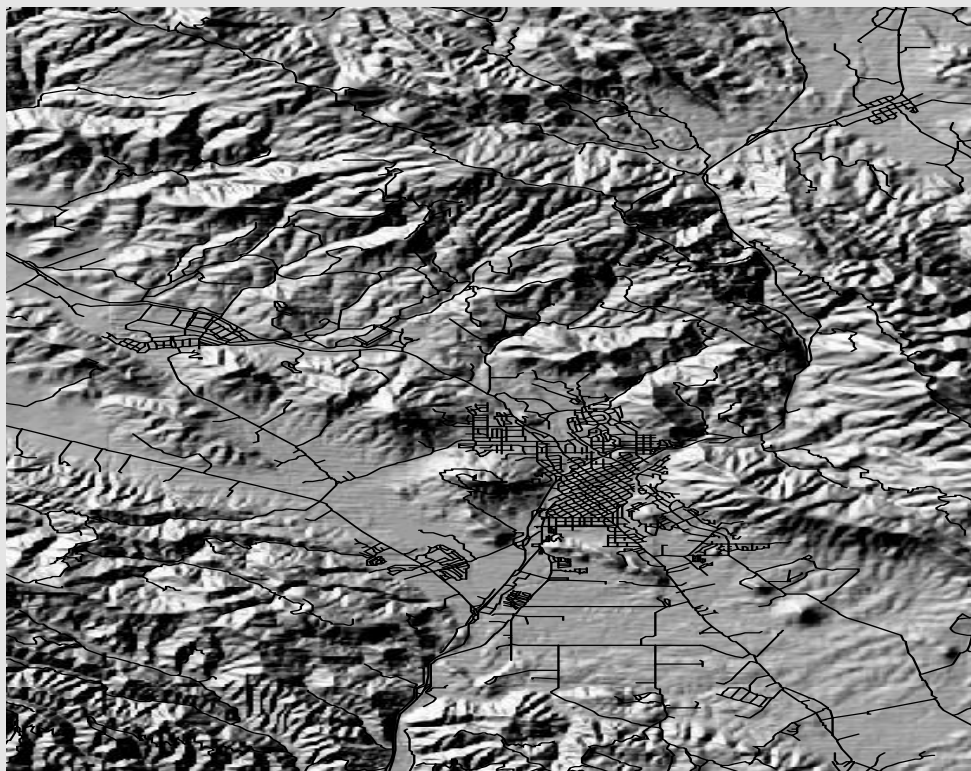


Parts of a Fire



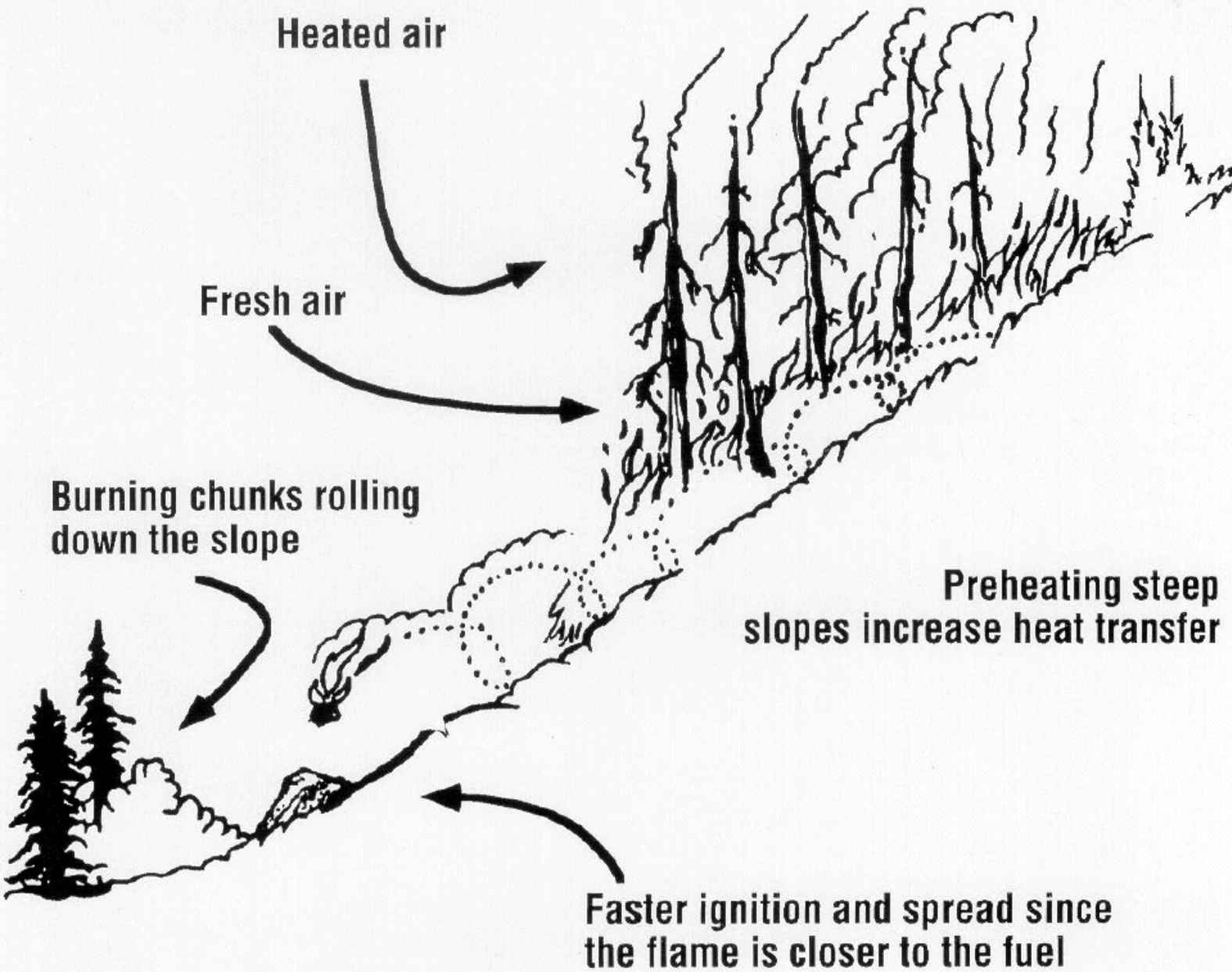
Three Factors Which Influence Fire

- Fuel
- Topography
- Weather
 - Most influential on the fire.



Topography

- **Air Flow**
 - Surface winds will usually be shaped by the canyon, following the canyon's direction, forming strong eddies and strong upslope currents.



Effects of Slope on a Wildfire



Effects of Slope on a Wildland Fire

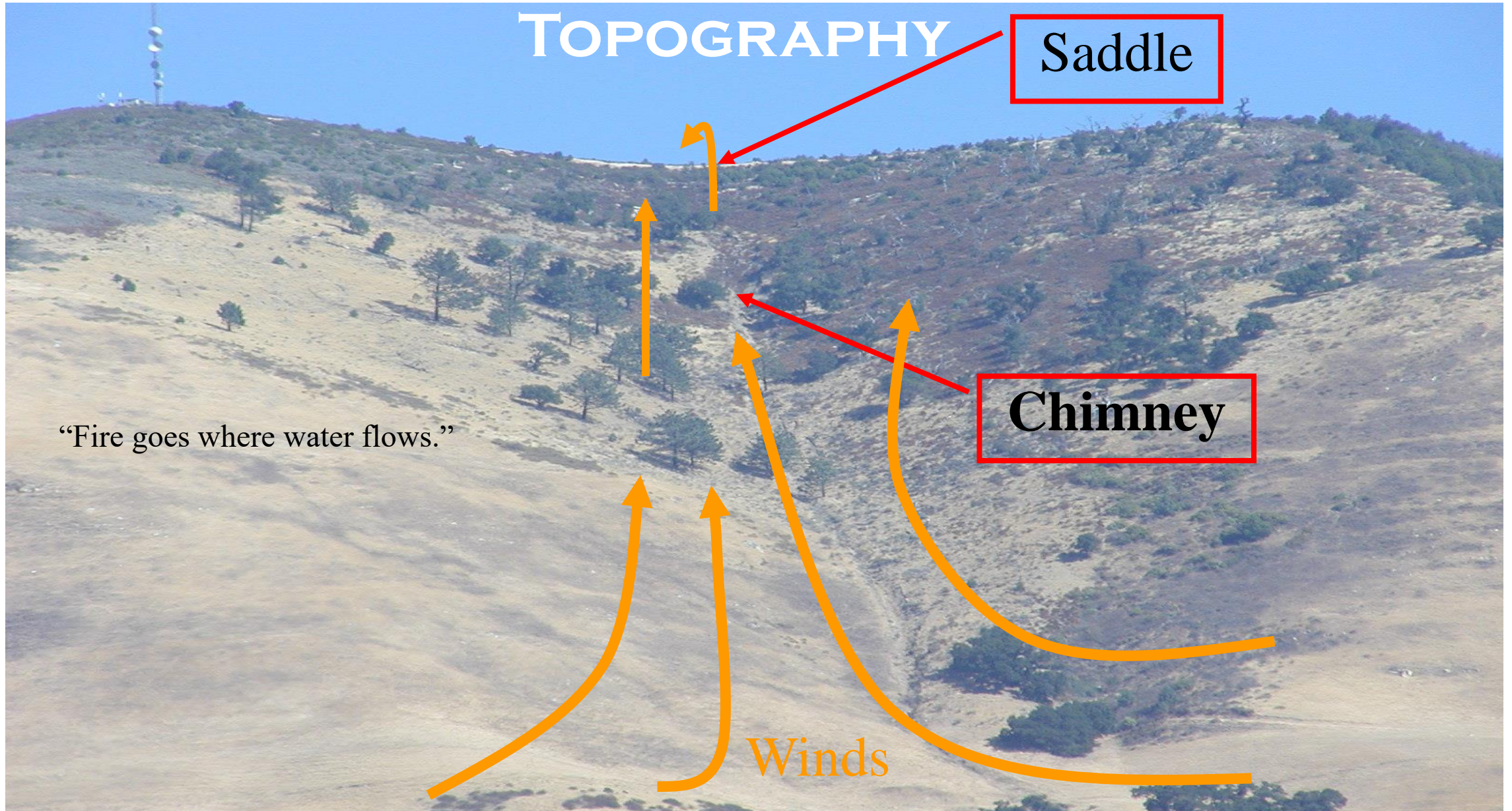
TOPOGRAPHY

Saddle

Chimney

“Fire goes where water flows.”

Winds



TOPOGRAPHY

South and Southwest slopes-

Normally are exposed directly to sunlight and generally have sparse, light fuels, higher temperatures, lower humidity, and lower fuel moisture

•North slopes-

Being more shaded, have more and heavier fuels, lower temperatures, higher humidity, and higher fuel moisture.



Weather



WEATHER ELEMENTS THAT INFLUENCE FIRE BEHAVIOR

WIND

- Pushes fire
- Most influential

TEMPERATURE

- Dries out fuel

RELATIVE HUMIDITY

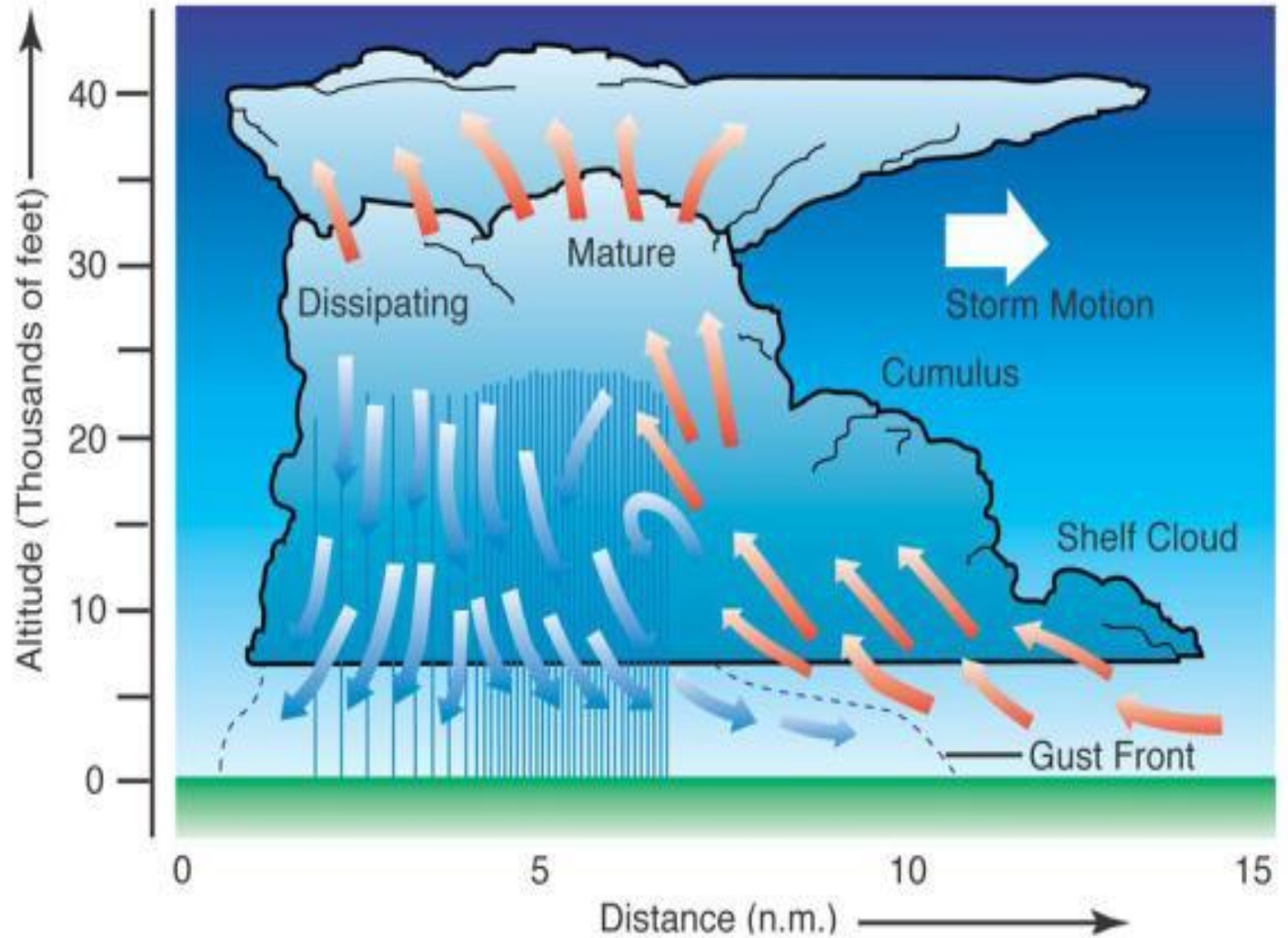
- Allows moisture to escape from fuel

Effects of Offshore Winds on a Wildland Fire



THUNDER CLOUDS – CUMULONIMBUS

- Strong down drafts when thunder cell collapses.
- Can reach heights of 35,000'
- Major safety concern to firefighters





PYRO- CUMULONIMBUS CLOUDS —

- The fire is making its own weather.
- Results form an intense fire with rapid growth
- Strong potential down drafts when cell collapses.
- Major safety concern to firefighters

AIR TEMPERATURE



**IF THE TEMPERATURE
INCREASES BY 20 DEGREE
THE RH WILL DROP 10%**



**AIR TEMP AFFECTS FUEL
TEMP.**

COMMON TERMS USED TO DESCRIBE FUELS BY TYPE.

Grass

- Light and flashy
- Easily effected by wind

Brush

- Heavy and intense burning
- Gives off a lot of BTU at low heights

Timber

- Above Ground fires with crown fire potential



Fire Line Hazards



Fire Line Hazards



- Do not stand under the drops from fixed wing or rotor wing aircraft
 - Type 1 tanker up to 24,000 gal
 - Type 3 tanker 1,200 gal
 - Type 1 copter up to 3,000 gal
 - Type 2 copter 360 gal
- Water weights 8.35 lbs a gallon
- Retardant 9 lbs per gal



Fire Line Hazards Powerlines

- Consider live till de-energized and grounded
- Dense smoke can cause a powerline to ground arc
- Down line on fence can energize the fence for miles

Fire Entrapment or Burnover



What is the experience and training of the individual(s) involved?

Does it allow them to recognize the situation they are in and make the appropriate response?

Do they have knowledge of all the pertinent factors?

Can they recognize it in time?

• *In a real fire entrapment or burnover, the human dimension is a critical factor:*

• *Situational Awareness*

Situational Awareness





L.C.E.S.

- **Lookout**
- **Communication**
- **Escape Route**
- **Safety Zone**



← Water Flow

Heavy Fuel and
inside turn

Light Fuel and
outside turn

Safety Zone

