



BUREAU OF FIRE PROTECTION
Region 1
Province of La Union
SAN JUAN FIRE STATION

TOPICS

INTRO TO FIRE SERVICE
RULE 6 OF RA9514
BASIC FIRE SCIENCE
FIRE ALARM & COMMUNICATION
FIRE SAFETY
FUNDAMENTALS OF FIRE SUPPRESSION & CONTROL



**BUREAU OF FIRE PROTECTION
SAN JUAN FIRE STATION-LU**

Vision

A modern fire service fully capable of ensuring a fire safe nation by 2034.

Mission

We commit to prevent and suppress destructive fires, investigate its causes; enforce Fire Code and other related laws; respond to man-made and natural disasters and other emergencies.



INTRO TO FIRE SERVICE

BRIEF HISTORY OF THE BFP

- 1900-** The **first fire department was established in Manila** during the American occupation.
- 1940-** **Fire departments were established in neighboring cities and towns** each has their own organizational set-up.
- 1975-** **Integration of the local fire departments in the city/municipality** police forces the Philippine Constabulary Integrated National Police (PC-INP).
- 1977-** PD 1185 – 1ST Fire Code of the Philippines was enacted.
- 1990-** **Republic Act No 6975 was enacted establishing a separate Bureau of Fire Protection**
- 2008 -** **Republic Act No. 9514- Revised Fire Code of the Philippines was enacted.**



RULE 6 OF RA 9514

RULE 6 of RA 9514 (Fire Code of the Phils. 2008)

FIRE BRIGADES, FIRE VOLUNTEER
ORGANIZATIONS AND FIRE SAFETY
PRACTITIONERS



RULE 6 OF RA 9514

DIVISION 1. SCOPE

This Rule shall govern the organization, equipage, operation and proficiency training of company and community fire Brigades as well as continuous training and competency evaluation of fire volunteers and fire volunteer organization in the country who shall undergo mandatory fire suppression, inspection, rescue, emergency medical services and other related emergency response training programs and competency evaluations to be conducted by the BFP. This also prescribes the continuous professional education, competency evaluation and recognition of Fire Safety Practitioners, to be conducted by the BFP. For this purpose, the term company shall include government and/or private offices and buildings.



RULE 6 OF RA 9514

ORGANIZATION OF FIRE BRIGADES

All business establishment employing at least fifty(50) persons shall establish an organization of fire brigade to deal with fires and other related emergencies.

The organization of company fire brigades shall consist of the

Fire Brigade Chief,

In his absence, an **Assistant Chief** shall be appointed



selected personnel (members of fire brigade)

A fire brigade is on duty or on call at all times.



RULE 6 OF RA 9514

DUTIES AND RESPONSIBILITIES OF A FIRE BRIGADE CHIEF

Responsible for the development of fire prevention programs and plans of action for the company or organization to address possible fire situation

Initiate the **procurement of necessary firefighting equipment and supplies** for use of the brigades.

Periodic evaluation of all equipment available for firefighting and replacing missing equipment or correction of inoperative equipment.

Bring to the immediate attention of the company or establishment head any situation that would likely reduce the effectiveness of firefighting operations

ensure that the brigades are suitably staffed

Prepare training programs for the members of the fire brigade and supervise its implementation

the Deputy Fire Brigade Chief shall assume and perform the duties and responsibilities of the Fire Brigade Chief, in his/her absences.



RULE 6 OF RA 9514

QUALIFICATION FOR MEMBERSHIP IN THE COMPANY FIRE BRIGADE

Members must be taken from the roster of its own workforce

Certificate of Employment

Fit to perform fire operation activities and further assign them to specific fire suppression positions

Medical clearance

Waiver



RULE 6 OF RA 9514

TRAINING OF FIRE BRIGADES, FIRE SAFETY PRACTITIONERS AND FIRE VOLUNTEER ORGANIZATIONS

A training design shall be developed by the BFP for fire brigades, fire safety practitioners, and fire volunteer organizations

All members of the fire brigade shall undergo training on
fire suppression,
rescue,
emergency medical services
and related emergency response.



RULE 6 OF RA 9514

COMMAND, EQUIPMENT MAINTENANCE AND FIRE DRILLS

Practice drills shall be held to check the ability of **members** to perform the operations they are expected to carry out

In practice drills, **all available equipment, devices, and tools for fire suppression and medical and rescue operation** must be operated

During fire fighting operations, the **fire brigades and fire volunteer organizations shall be under the direct operational control of the fire ground commander of the BFP.**



BASIC FIRE SCIENCE

HELPFUL



DESTRUCTIVE



FIRE





WHAT IS FIRE?

Is a rapid, self-sustaining oxidation process of combustible materials accompanied by the evolution of heat and light of varying intensity





FIRE IS

FAST

Fire spreads quickly; there is no time to gather valuables or make a phone call.

In just two minutes,
a fire can become life-threatening.

In five minutes,
a residence can be engulfed in flames.



BASIC FIRE SCIENCE

FIRE IS

DARK

A small fire can produce enough smoke to fill a building in minutes.





BASIC FIRE SCIENCE

FIRE IS

DEADLY

Most people who die in fires, die from breathing smoke and toxic gases.

Fire produces poisonous gases that make you disoriented and drowsy.

CARBON
DIOXIDE

NITROGEN
OXIDE

CARBON
MONOXIDE



BASIC FIRE SCIENCE

FIRE IS

DEADLY

CARBON
DIOXIDE

NITROGEN
OXIDE

CARBON
MONOXIDE

Physiological Effects of Reduced Oxygen (Hypoxia)

Oxygen in Air (Percent)

Symptoms

21

None – Normal Conditions

17

Some impairment of muscular coordination;
increase in respiratory rate to compensate
for lower oxygen content

12

Dizziness, headache, rapid fatigue

9

Unconsciousness

6

Death within a few minutes and concurrent
heart failure



BASIC FIRE SCIENCE

FIRE IS

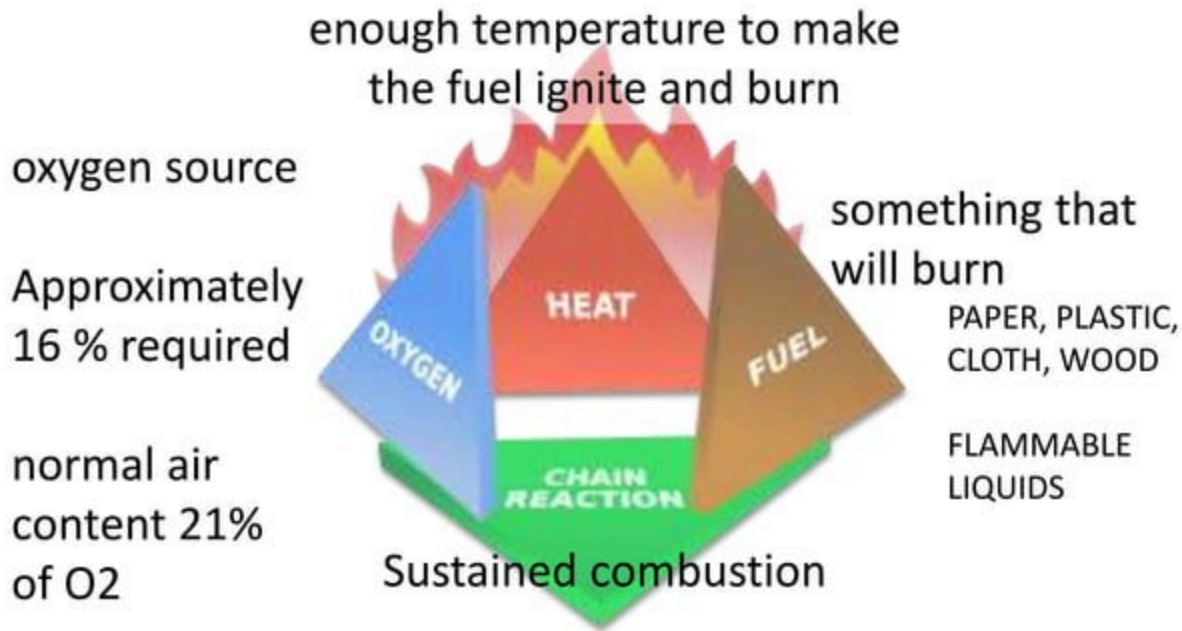
HOT

hot enough to melt
clothes, skin and
scorch your lungs in one
breathe





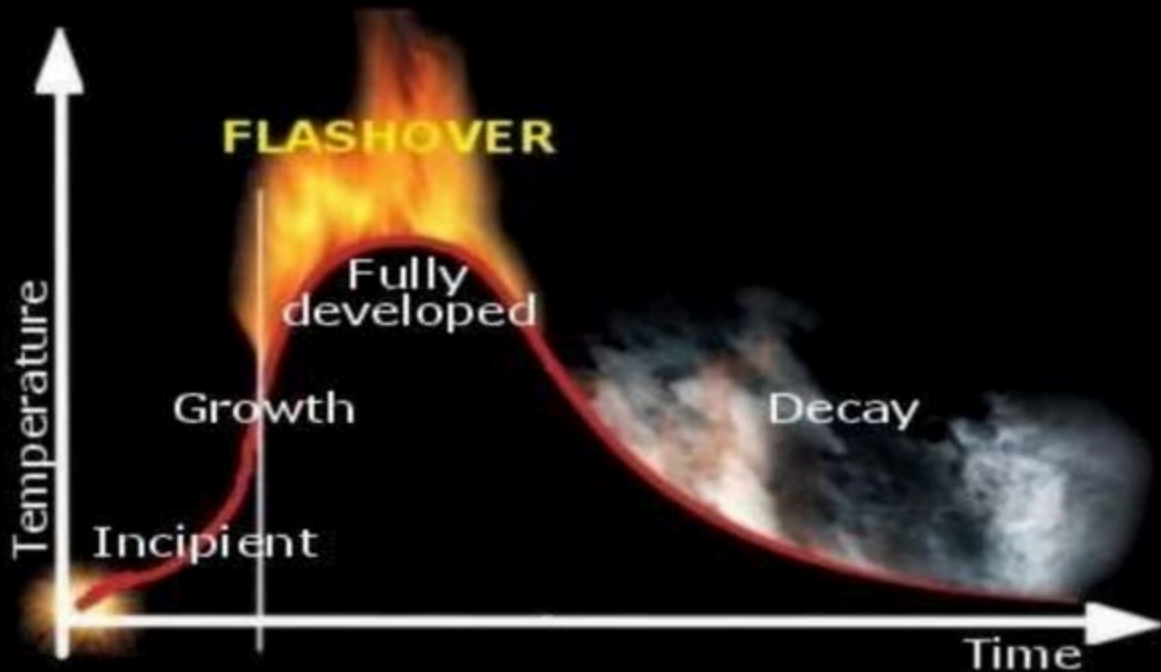
ELEMENTS OF FIRE





BASIC FIRE SCIENCE

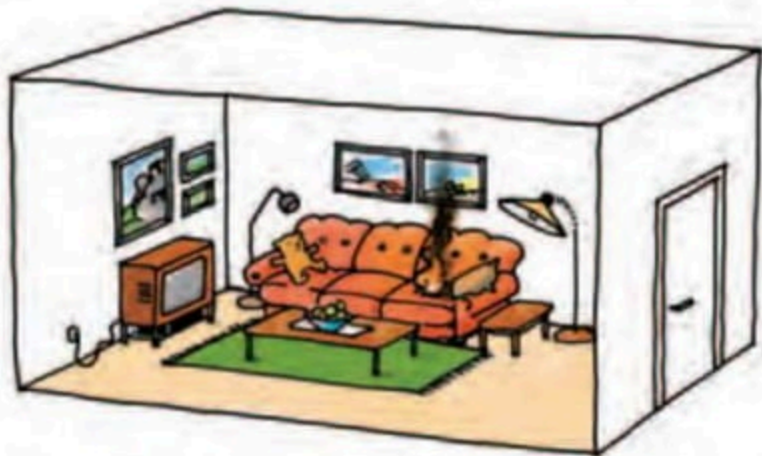
STAGES OF FIRE





BASIC FIRE SCIENCE

incipient stage



The initial fire is often small at first, and can be difficult to detect.



BASIC FIRE SCIENCE

growth stage



As the fire grows more and more hot gases are formed, which rise upwards and fill the upper part of the room.



BASIC FIRE SCIENCE

growth stage



After several minutes the smoke can be very hot, and it then contributes towards heating up the walls and ceiling in the room.



BASIC FIRE SCIENCE

fully developed stage



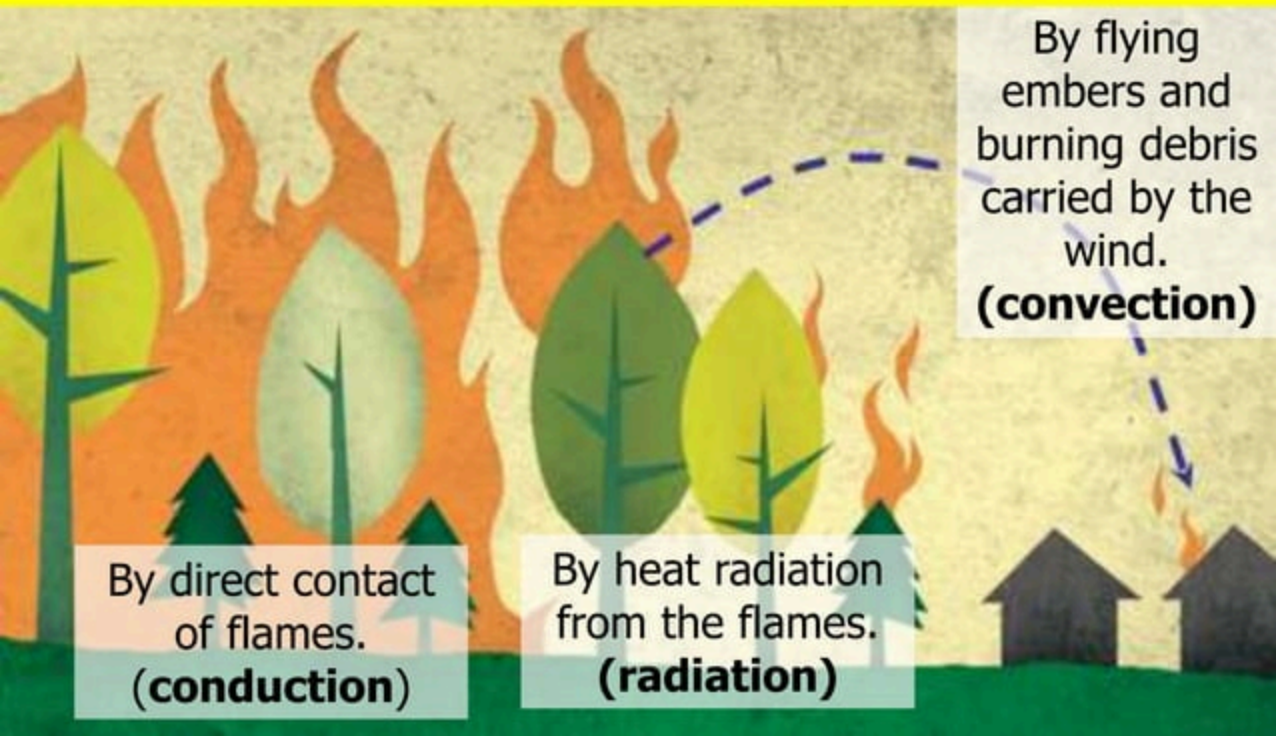
If there is sufficient air in the room all the objects in the room will be heated up to such an extent that the entire room can eventually be ignited during a relatively short period. This transition period is called flashover.

Flashover results in a fully developed fire.



BASIC FIRE SCIENCE

HOW FIRE SPREAD?



By direct contact
of flames.
(conduction)

By heat radiation
from the flames.
(radiation)

By flying
embers and
burning debris
carried by the
wind.
(convection)



BASIC FIRE SCIENCE

FIRE EXTINGUISHMENT

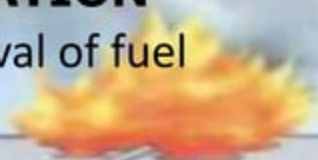
COOLING

reduction of
temperature



STARVATION

removal of fuel



SMOTHERING

exclusion of oxygen



BREAK CHEMICAL REACTION





BASIC FIRE SCIENCE

CLASSES OF FIRE

CLASSES OF FIRES	TYPES OF FIRES	PICTURE SYMBOL
A	Wood, paper, cloth, trash & other ordinary materials.	
B	Gasoline, oil, paint and other flammable liquids.	
C	May be used on fires involving live electrical equipment without danger to the operator.	
D	Combustible metals and combustible metal alloys.	
K	Cooking media (Vegetable or Animal Oils and Fats)	



6 STEPS TO SAFETY

S- ound the alarm

A- dvice the fire
brigade/ station

F- ight the fire

E- vacuate

T- ell others

Y- ou get clear





FIRE ALARM & COMMUNICATION

The first step toward halting a fire is to properly identify the incident, raise the occupant alarm, and then notify emergency response professionals. This is often the function of the fire detection and alarm system.

An uncontrolled fire can obliterate an entire room's contents within a few minutes and completely burn out a building in a couple hours.





FIRE ALARM & COMMUNICATION



BFP SAN JUAN FIRE STATION

ILI NORTE, SAN JUAN, LA UNION

(072) 687 5979

GLOBE 0915 934 8168

SMART 0919 996 1900

WHEN RECEIVING A CALL:

1. ANSWER THE CALL PROMPTLY
– WITHIN 2 RINGS
2. USE A CALM PROFESSIONAL MANNER
3. TAKE MESSAGE ACCURATELY

DATE AND TIME OF CALL

NAME OF CALLER

CONTACT NO.:

TYPE OF INCIDENT:

LOCATION OF EMERGENCY

NEAREST LANDMARK

4. SOUND THE ALARM



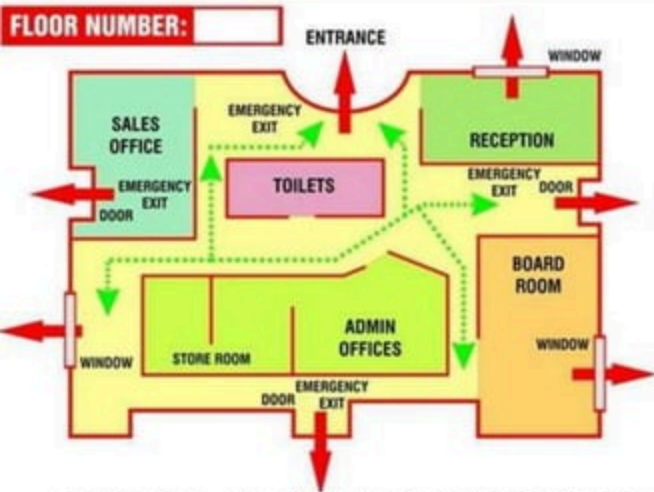
“GOOD
MORNING/AFTERNOON/
EVENING

BUREAU OF FIRE
PROTECTION (BFP)
SAN JUAN FIRE STATION,
I'M (STATE YOUR NAME).
HOW MAY I HELP YOU?”





FIRE SAFETY



REMEMBER: FIRE IS FAST. DEADLY SMOKE CAN FILL YOUR HOME WITHIN MINUTES

- IN EVERY ROOM/ FLOOR HAVE TWO WAYS OUT (MAIN & SECONDARY EXIT)
- CREATE AN EVACUATION PLAN AT WORK / HOME
 - PRACTICE AT LEAST TWICE A YEAR
 - MAKE SURE EXITS (DOORS AND WINDOWS) OPEN EASILY & UNOBSTRUCTED



STATION SAFETY

A. Fire Prevention

1. Safe storage and use of flammable and combustible materials
2. Proper use and maintenance of electrical equipment, appliances and associated wiring
3. Control of ignition sources
4. Proper use and disposal of smoking materials
5. Good house keeping
6. Installation and maintenance of fire protection systems- sprinklers, fire doors, and rated construction materials.

B. Individual Conduct

1. Avoid horseplay or other activities that may result in someone being injured
2. Walk rather than run all the times
3. Remove trip hazards

C. Slip and Slide Hazards

1. Mark wet floors to minimize use until dry
2. Advice personnel of freshly waxed floor surfaces
3. Secure loose carpeting and scatter rugs or mats



D. Cleanliness and personal hygiene

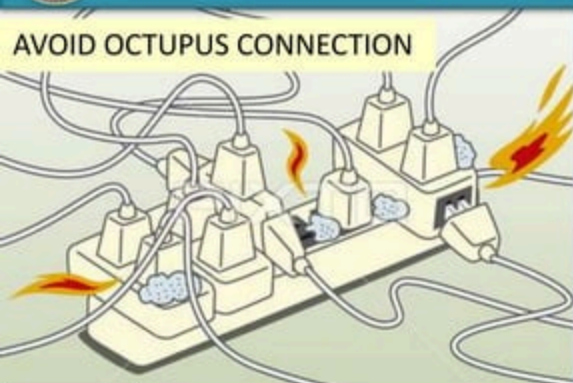
1. Wash hands with soap and water as rest rooms use or as needed
2. Exercise control of hazardous waste, especially biological waste
3. Maintain cleanliness of personal clothing and avoid taking contamination home or elsewhere after an incident.

E. Proper Clothing for Task

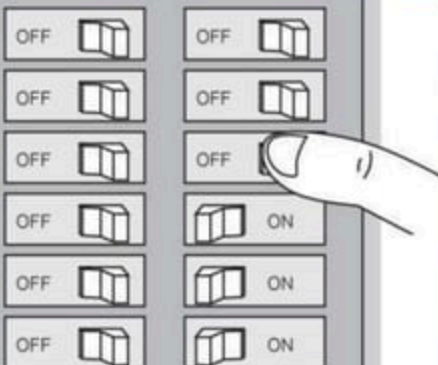


HOME FIRE SAFETY

AVOID OCTUPUS CONNECTION



SHUT-OFF STOVE BEFORE LEAVING THE KITCHEN



SHUT OFF POWER CIRCUIT WHEN NOT IN USE



REPLACE/REPAIR DAMAGED ELECTRICAL OUTLET



HOME FIRE SAFETY



MOST CAUSES OF FIRES AT HOME

1. Overheated electrical appliances
2. Unattended cooking
3. Open Flame
4. Electrical Short circuit

HOME FIRE SAFETY CHECKLIST

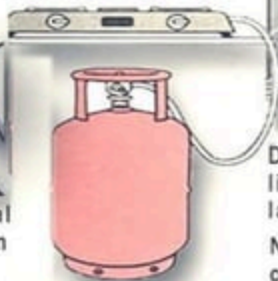
Prevent a devastating fire by taking basic precautions around the home.

Turn off LPG tanks, stoves and other cooking appliances before leaving

Never leave cooking unattended



Switch off all electrical appliances or the main switch before leaving your house



Do not leave lighted candles or lamps unattended

Never place a lighted candle or lamps near the window curtains

Repair or replace defective wires, switches and sockets



Keep matches and lighters away from the reach of children



FIRE SAFETY

Get Low & Go



IF THERE IS SMOKE , GET LOW TO THE FLOOR WHERE THERE IS OXYGEN, EVACUATE THE BUILDING, GO TO THE NEAREST EXIT

REMEMBER: HEATED AIR RISES

ONCE OUTSIDE, NEVER GO BACK TO THE BURNING BUILDING FOR YOUR VALUABLES OR PET, CALL THE NEAREST FIRE STATION



BFP SAN JUAN FIRE STATION
ILI NORTE, SAN JUAN, LA UNION

(072) 687 5979

GLOBE 0915 934 8168
SMART 0919 996 1900



call

**NEAREST
FIRE STATION**





VEHICULAR FIRE SAFETY

VEHICLE FIRE SAFETY



WHAT TO DO IN CASE YOUR CAR IS ON FIRE



PULL OVER as quickly as it is safe to do so.

TURN OFF THE ENGINE.

GET EVERYONE OUT OF THE CAR at least 100 feet from the burning car and away from traffic. Never return to a burning car for anything.

CALL FOR HELP



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(072) 687 5979

GLOBE 0915 934 8168

SMART 0919 996 1900



HOW TO PREVENT CAR FIRE

Have your car serviced regularly by a professionally trained mechanic. If you spot leaks, your car is not running properly, get it checked. A well-maintained car is less likely to have a fire.

Drive safely to avoid an accident.





PARTS OF FIRE EXTINGUISHER



FUNDAMENTALS OF FIRE SUPPRESSION & CONTROL

Fire Extinguisher Types

Extinguisher		Type of Fire					
Colour	Type	Solids (wood, paper, cloth, etc)	Flammable Liquids	Flammable Gasses	Electrical Equipment	Cooking Oils & Fats	Special Notes
	Water	✓ Yes	✗ No	✗ No	✗ No	✗ No	Dangerous if used on 'liquid fires' or live electricity.
	Foam	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	Not practical for home use.
	Dry Powder	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	Safe use up to 1000v.
	Carbon Dioxide (CO2)	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	Safe on high and low voltages.



FUNDAMENTALS OF FIRE SUPPRESSION & CONTROL



ACCESSIBLE



PROPER PRESSURE



CHECK SEALS



PHYSICAL DAMAGE



HOW TO USE A FIRE EXTINGUISHER

PULL the pin.



AIM the hose
or nozzle



SQUEEZE the lever

SWEEP the agent.





BASIC PRINCIPLES OF FIRE FIGHTING

**“HUMAN LIFE SHALL TAKE
PRECEDENCE OVERALL
OTHER CONCERNS”**



BASIC CONCEPT OF FIRE FIGHTING

1. **When sufficient manpower is not available** to effect both rescue and extinguishment at the same time, **rescue must given preference**

2. Remove those in greatest danger;

3. **When sufficient manpower is not present to perform all needed task**, perform those that **protect greater number of human lives first**;

4. When personnel are sufficient to do both, a coordinated fire attack must be carried out

5. **When there is no threat to occupants**, the **lives of fire fighters should not be unduly endangered**





10 PHASES OF FIRE OPERATION

1. **Pre-Fire Planning-** to fight fire before it occurs (fire prevention)
2. **Size-up-** an estimate of the situation.
3. **Rescue-** Removal of victims from endangered areas and bringing them to a place of safety.
4. **Cover Exposure-** to prevent the fire from extending to other involved building/structure.
5. **Confinement-** to prevent the fire from extending to other uninvolved portions of the burning building.

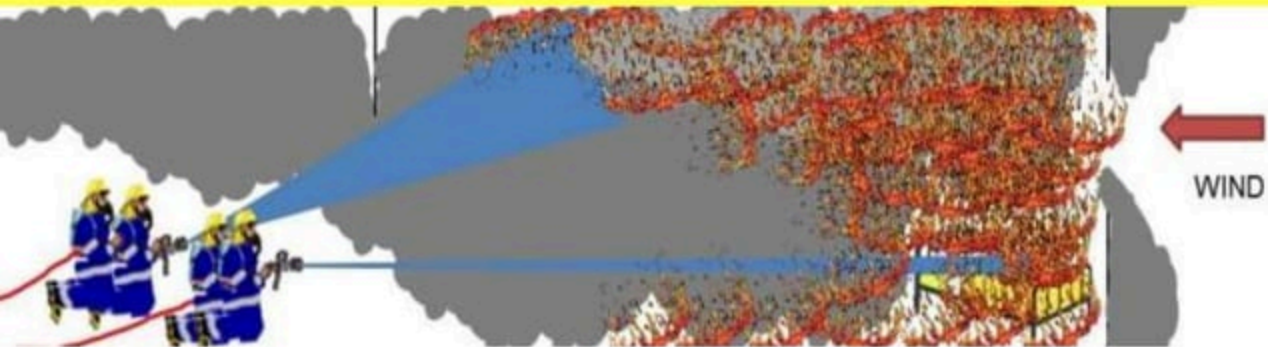


10 PHASES OF FIRE OPERATION

- 6. Ventilation-** to displace smoke, hot, poisonous or toxic gases from a contaminated area and replacing them with fresh air from outside.
- 7. Extinguishment-** to put out the main body of fire.
- 8. Salvage-** to protect properties of value from preventable damages due to sources other than the fire; minimize damage
- 9. Overhauling-** to prevent the fire from rekindling.
- 10. Post Fire Analysis-** a critique of the fire operations conducted.



FIRE FIGHTING STRATEGIES



1. **Offensive** – made on the seat of the fire or on the immediate area involved in the fire. This is most commonly used since, upon arrival, most fires are still small.
2. **Offensive-defensive** – involves a vigorous attack against the main body of the fire, while taking adequate measures to control actual and potential extension of fire. The major portion of the fire force operates directly on fire extinguishment problems and a lesser force on fire extension problems.



FIRE FIGHTING STRATEGIES

DEFENSIVE (FOGGING)



3. Defensive-offensive – this is essentially a “holding action” to keep the fire within reasonable bounds while awaiting the availability of additional forces.

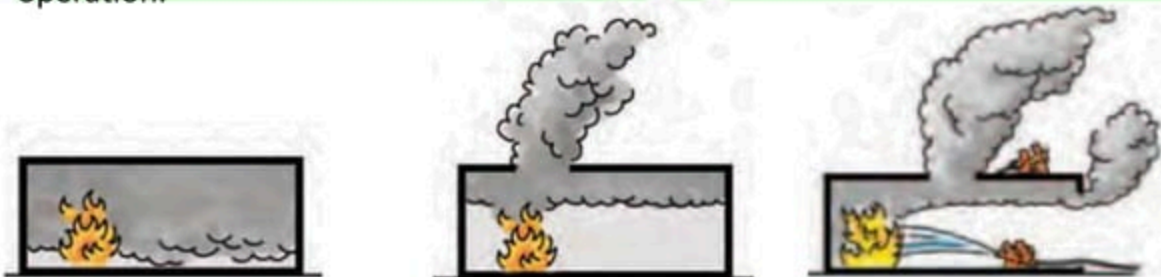
4. Defensive – all forces are heavily engaged in defensive actions. Typically, it would be used when the volume of fire and the number and nature of exposures preclude anything but defensive techniques.



VENTILATION

The objective of fire ventilation is to release heat and fire gases into the open. Depending on the type, configuration and implementation of the operation, this serves several purposes. We use fire ventilation to:

- Reduce the impact of fire gases and heat on trapped persons, and to facilitate their evacuation from the building.
- Facilitate the fire and rescue operation by reducing the thermal load, and to improve visibility in the building for the fire fighting crew.
- Prevent or contain the spread of fire or fire gases through a reduction of the impact of pressure and heat in the building.
- Enable or facilitate salvage and overhaul at an early stage of the fire and rescue operation.





VENTILATION

TYPES OF VENTILATION

1. Natural ventilation – merely requires opening doors and windows, creating a hole on the roof and letting physics take care of the rest.
2. Mechanical ventilation – the use of smoke fans consisting of ejectors and blowers, and the use of water to create air movement. Mechanical aids can accelerate the air movement and even reverse the airflow against natural air current movement. Use of fans and blowers in apposite or negative mode and water from a nozzle can provide a large air movement volume.





OVERHAUL

Overhaul is the process of searching for hidden fire extension on a fire scene. It is used in conjunction with salvage operations to reduce loss caused by fire.

Overhaul is one of the last steps in the firefighting process





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SAN JUAN FIRE STATION**

-END-

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