

# Fire Safety Forum



**For Apartment Managers in  
Kitsap County**

# Welcome!



- **Housekeeping**
- **Emergency procedures**
- **Introductions**



# Understanding the Fire Issue



# The Fire Problem



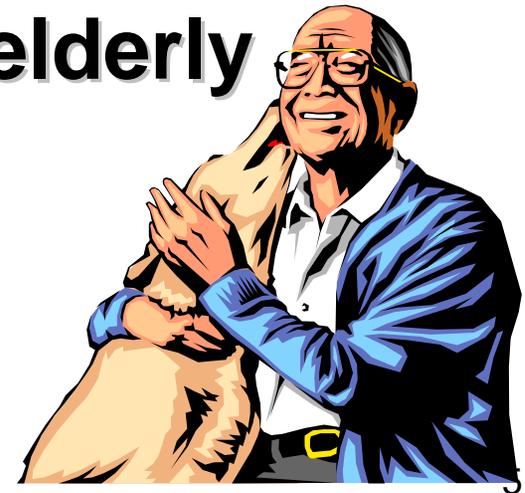
- **National Level**
  - **United States fire death rate**
  - **Every two hours someone will die from fire**
- **Local experiences**
  - **Major fires and fire fatalities**
  - **Bremerton Fire**



# Who Is At Risk?



- **Most fires happen in the home**
- **Most fires happen at night**
- **Families are at greatest risk**
- **Young children and the elderly**



# Why People Don't Survive Fires



# Prevention Issues



- **Fire isn't perceived as a threat**
- **Lack of knowledge**
- **Denial - "It won't happen to me"**

# Lack of Smoke Detection



- **Most homes have smoke detectors**
- **Over half of all fires and fire deaths occur in homes without working detectors**
- **Primary reason for failure**
  - **Dead, missing, or disconnected batteries**
  - **Disabled**



# Lack of Fire Protection Systems and Construction Features



- **Codes are the minimum standards**
- **Legislation by disaster**
- **Smoke detectors, fire alarms, sprinkler systems do save lives**
- **Special construction prevents fire spread**

# Human Behavior Issues

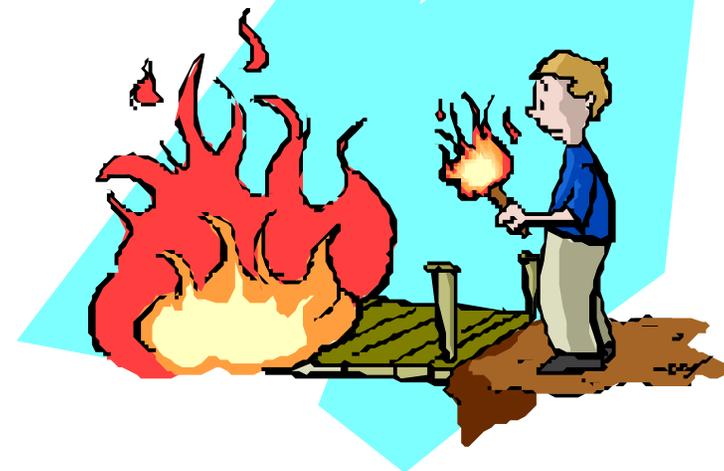


- **Stand up**
- **Think there is more time**
- **No outside meeting place**
- **Trying to extinguish a fire**
- **Go back inside**
- **Kids hide**

# Attitude and Misconceptions About Fire



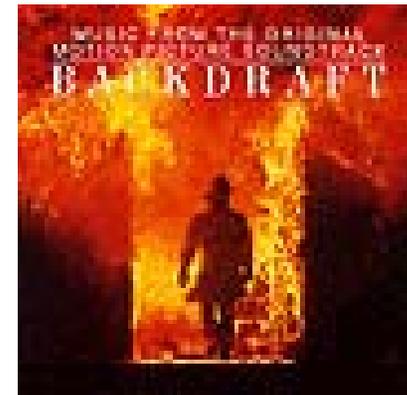
- **“The fire was an accident”**
- **“The insurance company will pay”**
- **“The firefighters will save me”**



# We Are Desensitized to Fire



- **Movies, Television**
- **Sayings, songs**
- **Literature**
- **Advertising, products**
- **Entertainment**



# Attitudes and Misconceptions



- **Hollywood fires are real!**
- **Reality or Not!**

**Not!**

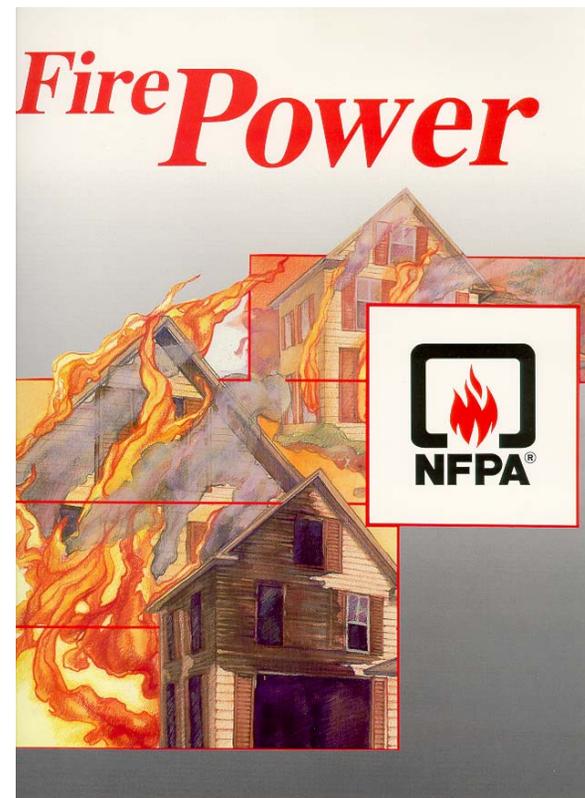
# Real Fire Behavior



# The “Real Thing”



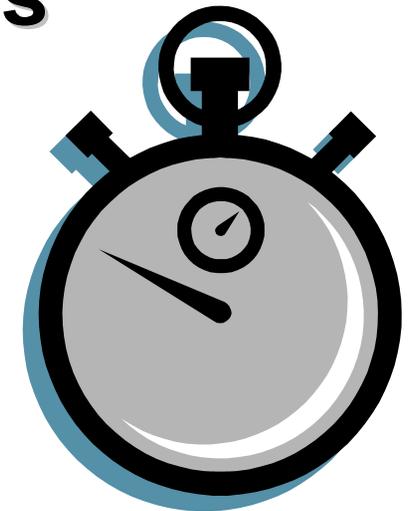
- Note the time when the smoke detector goes off
- Note the time when flashover occurs
- Note the time when the sprinklers activate



# Fire Time Line



- **Smoke detector wakes you up**
- **Wake up & figure out what is happening**
- **Wake family and get out**
- **Go to neighbors & call 911**
- **Dispatch time**
- **Firefighters arrive on scene**

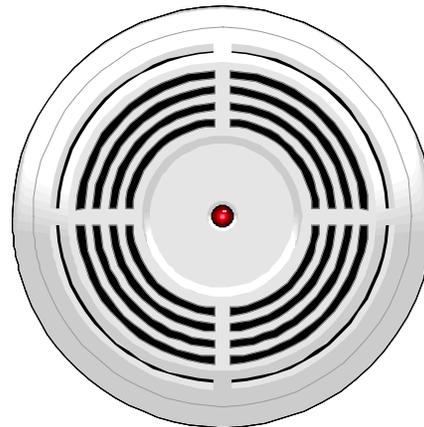


# The Bottom Line



- ***We need to take personal responsibility for our safety***
- **Who's job is it?**
  - **Fire Departments Role**
  - **Management and Property Owners**
  - **Tenants**

# Fire Hazards & Prevention Strategies



# Prevention - Common Fire Hazards



- **Smoking materials, cigarettes**
- **Cooking**
- **Heaters**
- **Fireplace ashes**
- **Electrical**
- **Candles**



# Fire Hazards con't



- **Fireplaces and wood stoves**
- **Spontaneous combustion - rags**
- **Halogen lamps**
- **Flammable liquids**
- **Fireworks**
- **Christmas trees**



# Arson



- **Second leading cause of fires**
- **Motives**
- **Protecting yourself**



# Youth Firesetting



- **Why kids set fires**
- **What managers can do**
- **Fire Stoppers Program**
- **Chargeable age**
- **Confidentiality issues**



# Smoke Detectors



**Individual Apartment Units**

# Smoke Detectors



- **Detectors in units vs. common areas**
- **Why smoke detectors are important**
  - What happens when you sleep
  - Early warning
- **Placement - hallways/bedrooms**
- **Landlord and tenants have different responsibilities**

# Landlord Responsibilities



- **Working smoke detector required in every dwelling unit**
- **Demonstrate to tenant that smoke detector is fully operational**
- **Educate tenants on maintenance and tenant responsibility**

# Tenant Responsibility



- **Maintain their smoke detectors**
  - **Test regularly**
  - **Replace battery**
  - **Clean yearly**
  - **Notify management of any problems**

# Disabling Detectors

## *Why do they do it?*



- **Poor location**
- **Lack of education**
- **Penalty - “Tampering with fire equipment”**
- **What the Fire Department can do to help**



# Types of Smoke Detectors



- **Hardwired into electrical system**
- **Battery operated**
  - **Temporary silencing button**
  - **Hearing impaired**
  - **Lithium battery**

# Skills for Surviving a Fire



# Surviving a Fire con't



- **Sleep with the door closed**
- **Treat every alarm as an emergency**
- **Know two ways out (doors, windows, escape ladders)**
- **Be able to unlock and open doors and windows easily**
- **Identify outside meeting locations(s)**

# Surviving a Fire con't



- **Discovering a fire...  
...initiate evacuation**
- **Extinguish or contain  
the fire**
- **Feel the door**
- **Crawl low under smoke**
- **Get out - stay out!**
- **Report the fire - call 911**



# If You Can't Get Out



- **Barriers and space**
- **Block heat, smoke, and gas**
- **Stay low**
- **Call 911**
- **Signal for help**



# People with Special Needs



- **Communications**
- **Mobility**
- **Dementia/Mental health issues**
- **Hearing/Vision**
- **Buddy system**
- **Identification**
- **Evacuation or protect in place?**



# Protect in Place



- **Stay where you are**
- **Space and barriers**
- **Blocking heat, smoke, and gas**
- **Calling 911**
- **Staying low**
- **Areas of Refuge**
- **Buddy system**

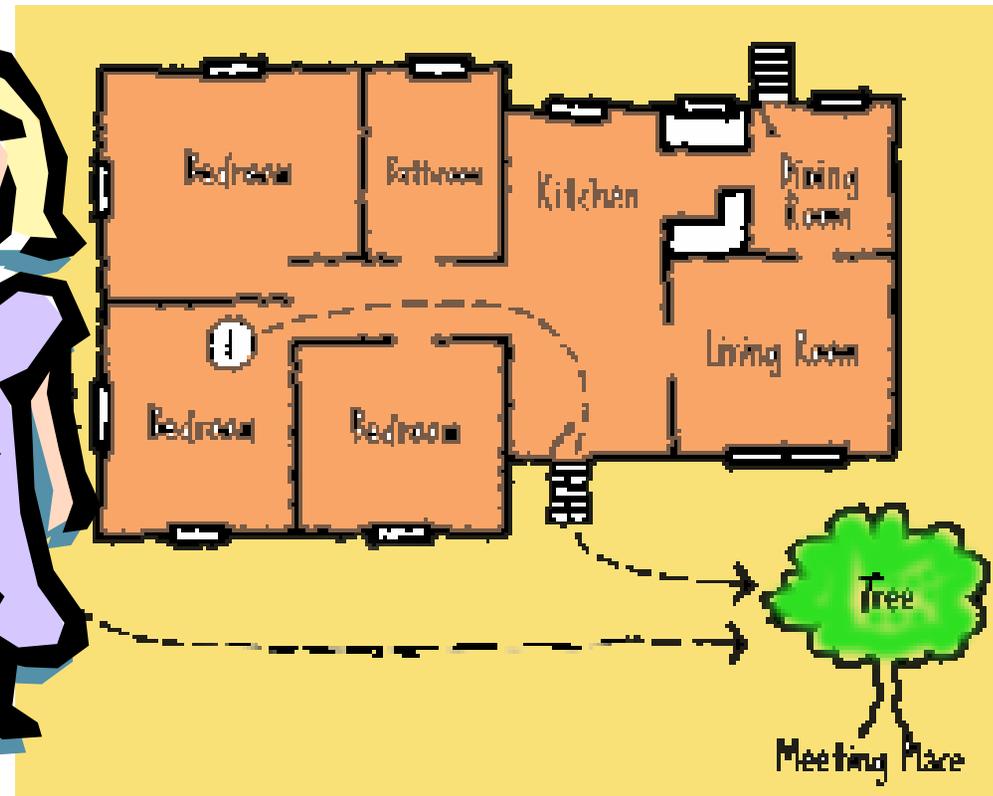
# Strategies for Education Residents



- **New tenant orientation**
- **Resident reports**
- **Meetings/Forum**
- **Face-to-face/Home inspections**
- **Mailings/Handouts/Newsletters**



# Emergency Procedures and Evacuation Planning



# Why Plan?



- **Reduces panic**
- **Avoids confusion**
- **Assists in Fire Department operations**
- **Recovery efforts**



# Uniform Fire Code Article 13



- **Fire emergency guide (for residents)**
- **Emergency plans and procedures (for staff)**
- **Employee duties, assignments and training**
- **Fire drills**

# Developing a Plan - Actually Two!



- **Fire Emergency Guide (for tenants)**
- **Emergency Plan (for staff)**

**FIRE ESCAPE** →



# Special Considerations



- **Size and design of building**
- **Occupants**
- **On-duty staff (24 hours?)**
- **Fire protection equipment and building safety features**
- **Types of emergencies**

# Fire & Life Safety Team



- **Evacuation Manager**
- **Floor/Building Monitors**
- **Assistance Monitors**
- **Maintenance/Facilities Personnal**
- **Back ups**
- ***Residents can help!***

# Involving Residents



- **Valuable insight and life experience**
- **Choose individuals who are confident**
- ***Always ask permission first!***

# Fire Evacuation Overview



- 1. Fire is discovered**
- 2. Alert occupants - evacuate**
- 3. Evacuation manager reports to outside meeting location**
- 4. Floor/Building monitors help evacuate**

# Evacuation con't



- 5. Facilities investigates (*if safe!*)**
- 6. Occupants report to outside meeting location**
- 7. Monitors report to outside meeting location with evacuation status**
- 8. Facilities reports any problems**

# Fire Department Responds



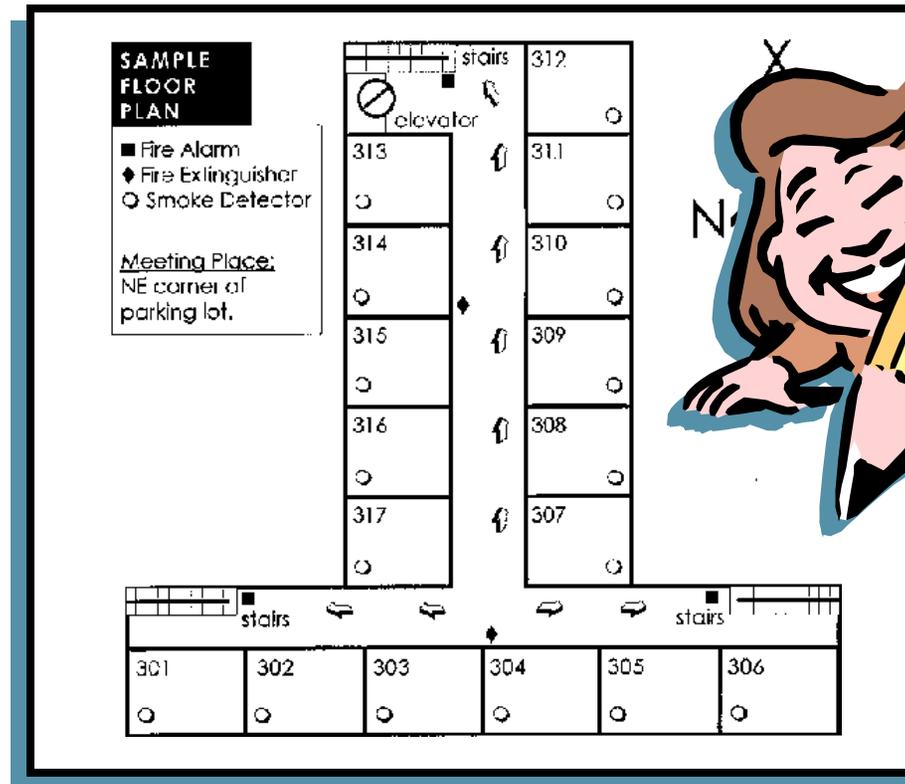
- Investigate problem
- Search and rescue
- Extinguishes fire
- Residents stay at outside meeting location until authorized to re-enter or leave



# Getting Started



- Pen, pencil, building plans, people



# Survey the Building



- **Fire Protection Systems**
- **Exiting/Evacuation Routes**
- **Fire and Life Safety Items**



# Fire Protection Systems



- Fire alarm pull stations
- Fire extinguishers
- Strobes
- Fire alarm panel
- Detectors
- Sprinkler riser
- Sprinklers



# Exiting & Evacuation Routes



- **Emergency lighting**
- **Exit signs**
- **Fire doors**
- **Stairwells**
- **Exit patterns/doors**
- **Elevator**
- **Potential obstacles**



# Exiting/Evacuation Routes



- **Outside meeting location(s)**
- **Fire lanes**
- **Areas of refuge**
- **Voice systems**



# Other Fire & Life Safety Items



- Addressing
- Utility shut-offs
- Electrical/mechanical
- Other hazards (on and off site)
- Special alerting systems
- Building security



# Learn About the Tenants



- **Survey the occupants**
- **Everyone who can evacuate should!**
- **People with special needs - buddy system**
- **Protect in place**



*Why is it important for people to evacuate if they can?*

# Buddy System or Protect in Place



- **Helper (family or friend)**
- **Safe areas of refuge**
  - Apartment unit
  - Enclosed stairwell
  - Beyond fire doors (some drawbacks)
  - Special fire resistive rooms
- **How to protect in place**

# If Someone Refuses to Evacuate



- **Follow-up, hold them accountable**
- **Educate, if that doesn't work**

**...Teach them what they can do to survive**

# Break the Building Into Sectors



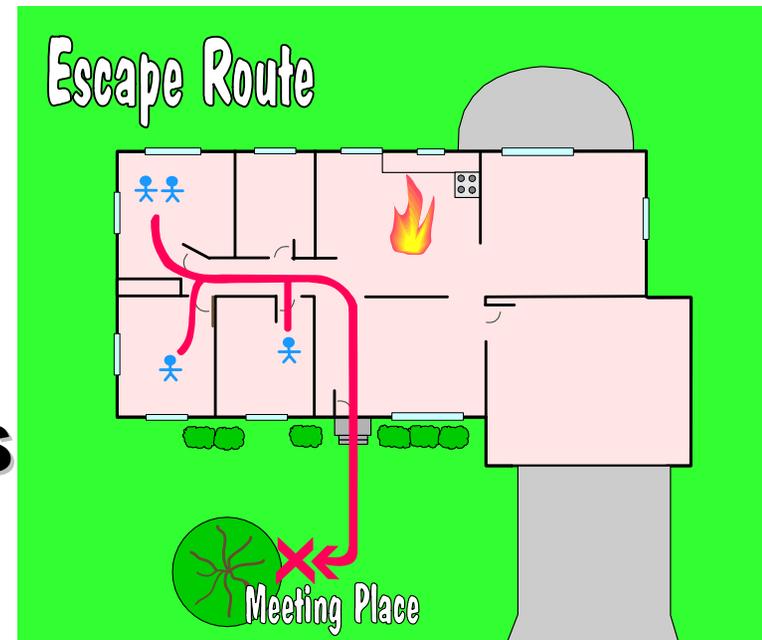
- **Consider**
- **Interior/exterior exit systems**
- **Size**
- **Number of floors**
- **Special needs of residents**



# Outside Meeting Locations



- **Specific place**
- **One is best**
- **Stay outside**
- **Multiple buildings**



# Outside Meeting Location(s)

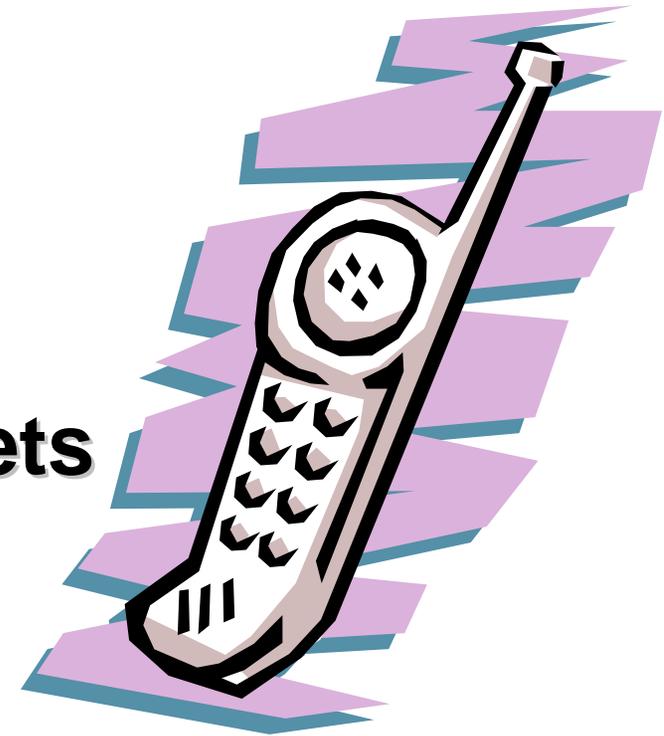


- **How many?**
- **Obvious location**
- **In front and away from building**
- **Away from fire apparatus access roads**
- **Keep residents in one area**
- **Stay together**
- **Residents leaving the meeting location**

# Communications and Identification



- Radios
- Runners
- Cell phones
- Vests, hats, or jackets



# Calling 9-1-1



- **Call even if the alarm is monitored**
- **False alarms**
- **Post phone numbers**
- **Calling 9-1-1 (stay on line)**
- **(9) 9-1-1**
- **9-1-1 compatibility**



# After the Fire Emergency



- **Fire investigation (more later)**
- **Safety**
- **Fire protection systems - repair, fire watch**
- **Power outage**
- **Clean-up**
- **Needed services (contact in advance)**

# Fire Drills



- **Required quarterly - different shifts**
- **Involving residents (optional)**
- **Announced vs. unannounced**
- **Be creative - plan the unexpected**
- **Notify alarm company - setting off alarm**
- **Incentives**
- **Evaluation and records**

# Other Emergencies



- **Include in Emergency Plan for staff**
- **Not required for tenants - but helpful**
- **Why it is important you plan**
- **Many types of disasters and emergencies**

# Earthquake



- **During**
- **When to evacuate**
- **Injuries**
- **Gas leaks and fires**
- **Communications**
- **Loss of power and utilities (water, gas, electricity, telephones, cable)**



# Winter Storms



- **Power outages - candles and open doors**
- **Fueled cooking and heating equipment**
- **Hypothermia**
- **Failure of fire protection systems**
- **Heavy snow loading on roofs**

# Flooding



- Storm drains back up
- Parking lot floods
- Lower units flood



# Volcanoes



- **Flooding**
- **Earthquakes**
- **Ash fall or acid rain**
- **Flooded rivers**
- **Landslides**
- **Rockfalls**



# Civil Unrest



- Riots
- Arson
- Violence
- Vandalism



# Other Emergencies



- **Gunfire**
- **Intruders**
- **Hostage situations or standoff**
- **Wildland/brush fires**
- **Hazardous material accident**
- **Terrorism**



# Potential Problems and Issues



- **Structural evaluation**
- **Relocation of residents**
- **Utilities - leaks, cross contamination, power outages**
- **Fires**
- **Injuries - medical attention required**
- **People trapped - search and rescue**
- **Communication systems go down**

# Teams - Staff and Residents



- **Fire and Life Safety Team**
- **People with special skills**
  - **Medical attention**
  - **Checking for fires - extinguishment**
  - **Utilities and gas leaks**
  - **Assess structural damage**
  - **Resident safety and welfare**
  - **Search and rescue**

# Identify and Mitigate Hazards



- **On site - potential hazards**
- **Off site - potential hazards**
  - **Major arterial - transportation accident**
  - **Overhead power lines**
  - **Hazardous materials facility**
  - **Gas pipe line**



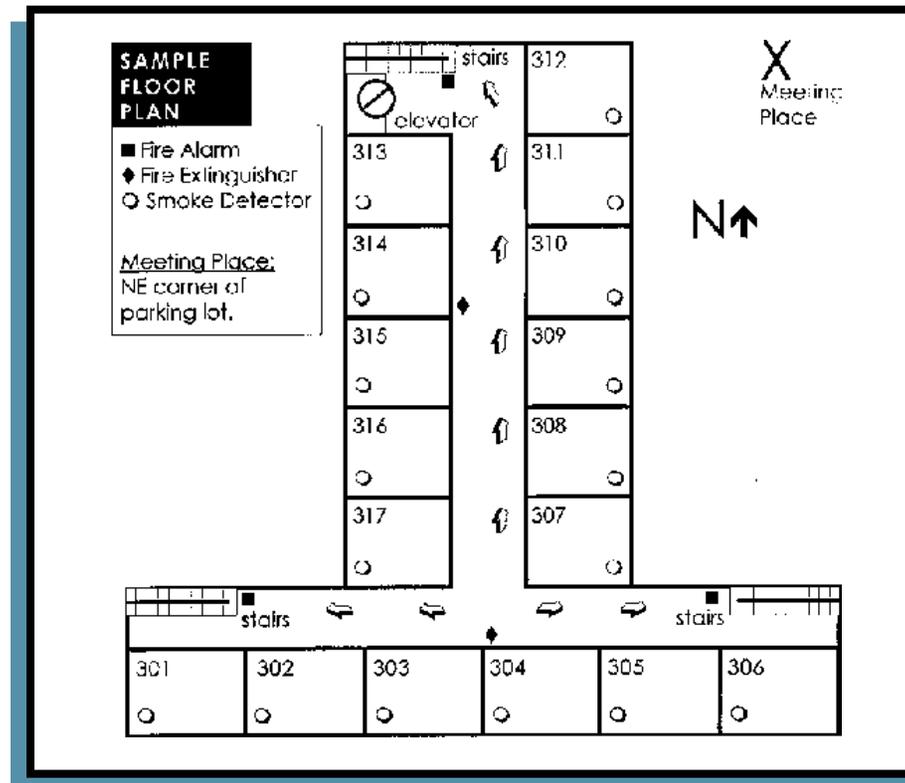
# Personal Preparedness



- You and your staff
- Residents



# Preparing the Documents



# Fire Emergency Guide (tenants)



- **Simple clear diagram**
  - **Unit relative to floor or building**
  - **Two or more ways out - exit patterns**
  - **Fire extinguisher locations**
  - **Fire alarm pull stations**
  - **Smoke detectors**
  - **Outside meeting location**
  - **Address and unit number**

# Fire Emergency Guide (tenants)



- **Instructions on:**
  - **Fire Safety Procedures (prevention)**
  - **Your building's fire alarm**
  - **Your building's sprinkler system**
  - **In case of a fire**
  - **Using a fire extinguisher**
  - **Protect in place**

# Emergency Plan (staff)



- **More complex**
- **Diagrams**
  - **Building and site footprints**
  - **Fire protection systems**
  - **Building safety features**
  - **Evacuation routes, areas of refuge**
  - **Outside meeting locations**

# Emergency Plan (staff)



- **Narratives - fire protection and life safety systems**
- **Emergency and evacuation procedures**
- **Training**
- **Fire drills**
- **Updating the plan**

# Introducing the Plan to Tenants



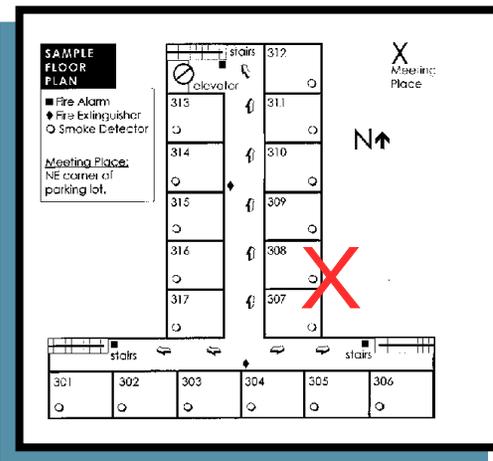
- **Current tenants**
- **New residents and leases**
- **Updates**
- **Floor monitor help**
- **Hallway education**



# Posting the Plan

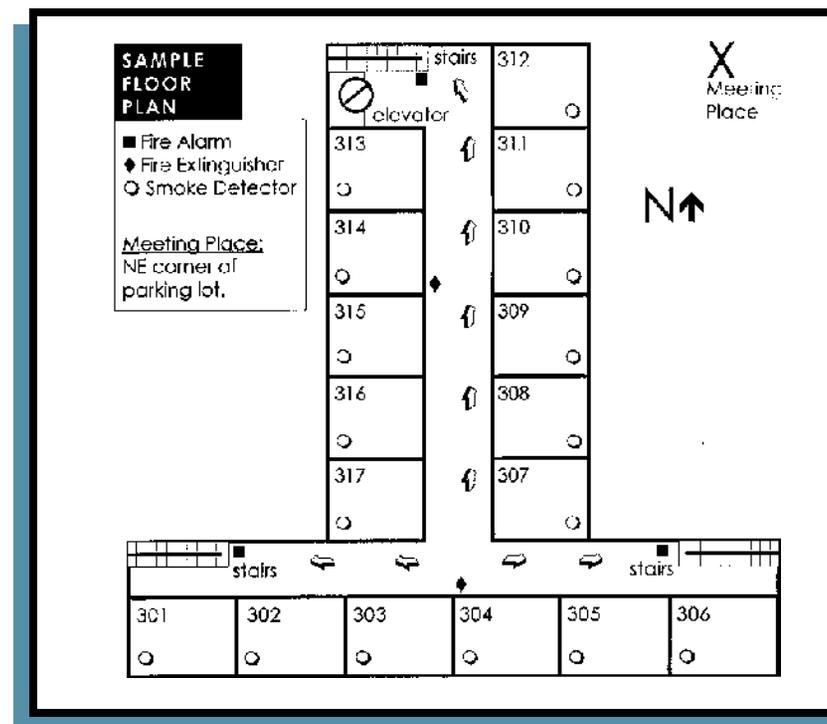


## ■ Fire diagrams in obvious locations



Okay...here is my quickest escape route

# Posting the Plan



**Post Emergency Evacuation plan in obvious locations**

# Training Employees



- Hands-on
- Table-top exercises
- Fire Department program materials



# Review and Maintenance of Emergency Plans and Guides



- **Review annually**
- **Revise when changes are made to the occupancy or building**
- **Submit the plan to the fire department for review**

# What Happens in a Real Fire Emergency?



# Fire Department Response



- **You call - we come!**
- **Who responds**
- **Making order out of chaos - ICS**
- **Priorities - rescue or put out the fire**
- **Damage - why we do what we do**
- **Preserving property**
- **Interfering with fire fighting operations**

# After the Fire is Knocked Down



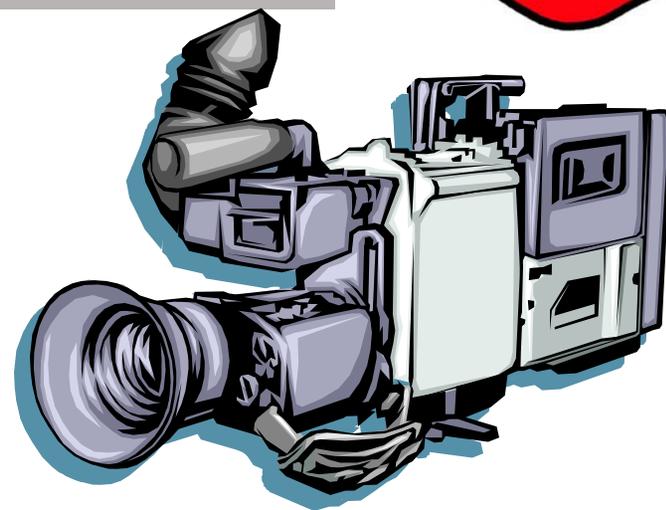
- **Overhaul**
- **Scene security - safety and security**
- **Investigation**
- **Salvage**



# Media



- **How they know**
- **Who may come**
- **What to expect**
- **Interviews with residents and witnesses**
- **Working with the media**



# Public Information Officer



- **Fire Department media liaison**
- **Helps victims and families**
- **Works with Red Cross**
- **Coordinates with insurance**
- **Supports Incident Commander**
- **Logistics**

# Fire Investigation



- **Determines origin and cause of fire**
- **Collects evidence**
- **Interviews witnesses**
- **Photographs and documents the scene**
- **Criminal follow-up if arson**
- **Scene security**



# Other Activities/Issues



- **Building and safety inspections**
- **Private fire investigators**
- **Insurance claims adjusters**
- **Repair/maintenance companies**
- **Relocation of residents**
- **Disrupted services**
- **Clean-up**

# After the Fire - Debriefing Meeting



- **Large loss fires, loss of life**
- **Residents have an opportunity to diffuse**
- **Dispel rumors and fears**
- **Opportunity to answer questions**
- **Teachable moment - education opportunity**

# Fire Protection Systems



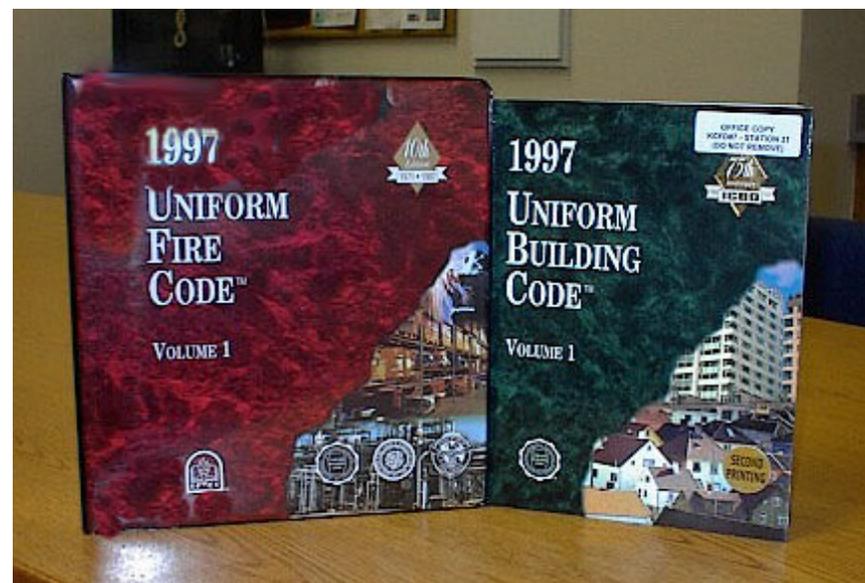
- **Building Construction Features**
- **Fire and Life Safety**



# Fire Code



- Annual inspections
- Building and Fire permits
- Applicability of codes



# Fire Lanes



- **Why are fire lanes necessary?**
- **Parking violations/citations**
- **Towing requirement and process**
- **Marking requirements**



# Fire Lane Markings



**NO PARKING**

**Tow Away Zone**



# Sprinkler Riser



- **Dry & Wet systems**
- **Local alarms**
- **Spare sprinkler heads**
- **Housekeeping**
- **Monitoring**
- **Certification**



# Sprinkler Heads



- How they activate
- Clearance

**Painting the heads**  
**Hanging items from**  
**the heads**



# Connections and Valves



**Post Indicator Valve**



**Fire Dept. Connection**

# Connections and Valves



**Fire Department Connection**



**Outside Stem and Yoke**

# Fire Hydrants



- **Clearance**
- **Maintenance**
- **No parking**
- **Blue reflector street markers**



# Fire Alarms



- Alarm panel
- Monitoring
- Maintenance



# Detectors



**Smoke Detector**



**Heat Detector**



**10 Year Lithium  
& 9V Detector**

# Special Alarm Devices



**Annunciator and graphic map**



**Outdoor bell and strobe**



**Indoor Horn and strobe**

# Monitoring



- **What is it?**
- **How do I know if my system is monitored?**
- **Will they notify me if there is a problem?**
- **Will they notify the fire department?**
- **Will they know the specific problem?**
- **Are they separate from the fire alarm and sprinkler companies?**
- **What happens if I discontinue this service?**

# False Alarms



- **Do not silence or reset the alarm; wait for the fire department**
- **Tampering with fire equipment - penalties**
- **Malicious pulls**
  - **False reporting - gross misdemeanor**
  - **Penalties - court charges, restitution**
  - **Juveniles (chargeable age)**
  - **Police and Fire Department involvement**

# Vandalism to Fire Protection Equipment



- **Similar to false reporting - crime**
- **Need witness information**
- **Police and Fire Department involvement**



# Exit Signs



- **Why are they important?**
- **Battery back-up**
- **Testing**
- **Maintenance**
- **Relocation**



# Emergency Lighting



- **Why is emergency lighting important**
- **Battery back-up, testing**
- **Servicing / maintenance**



# Rated Exit Corridors



- **Why are they important?**
- **Rated corridors**
- **Keep clear**
- **Fire doors - do not prop open**
- **Repair to walls**



# Fire Doors



**2-hour fire rated door**



**Magnetic hold-open device**

# Exits



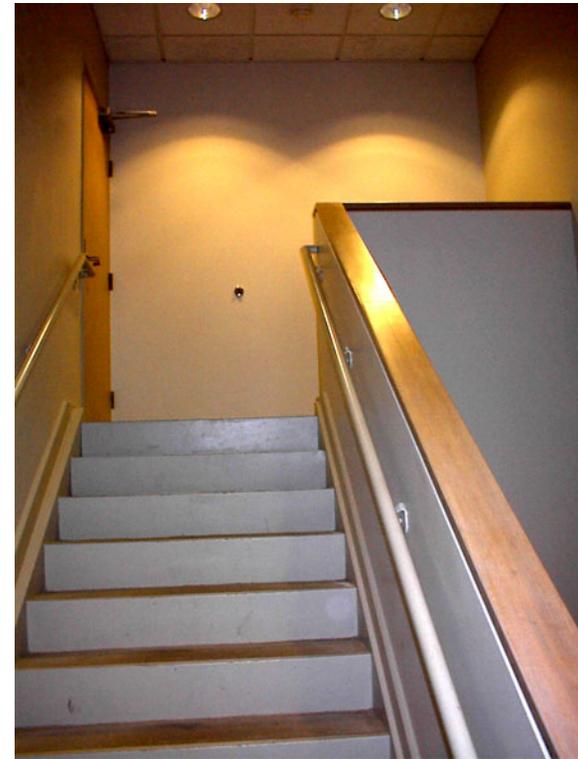
- **Keep exits clear and unobstructed**



# Enclosed Exit Stairwell



- **Keep clear**
- **Remove all storage**



# Panic Hardware



- Purpose of panic hardware
- All exit doors to remain unlocked on the inside



# Fire Extinguishers



- **Location and size requirements**
- **Installation and cabinets**
- **Accessibility**
- **Maintenance - annual certification**



# Addressing and Access



- **Why it is so important**
- **Code requirements**
  - City
  - County
- **Rapid access key boxes**

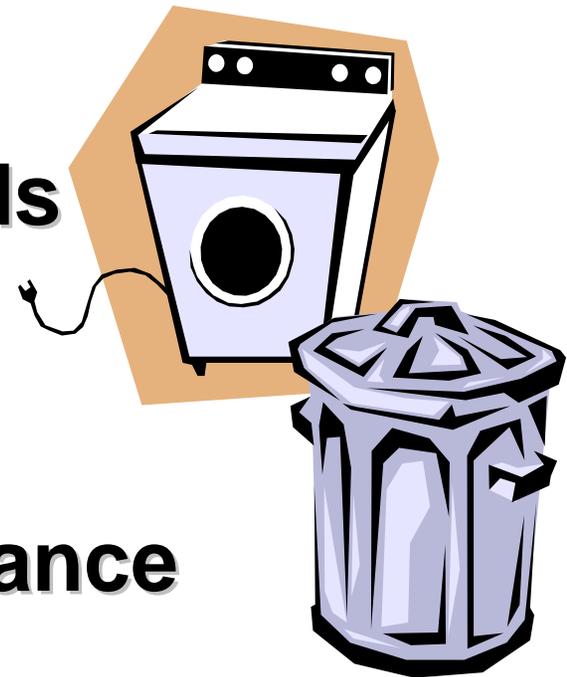


"We can't help you if we can't find you!"

# General Housekeeping



- **Dryer lint**
- **Combustible storage**
- **Overgrown grass/weeds**
- **Dumpsters**
- **Trash/waste cans**
- **Gas water heater clearance**



# Electrical



- **Covers on outlets and junction boxes**
- **Use approved multi-plug adapters**



# Electrical Panels



- **Keep clear**
- **Label**
- **Sign on electrical room doors**
- **Keep electrical and mechanical rooms clear of storage**



# Flammable & Combustible Liquids



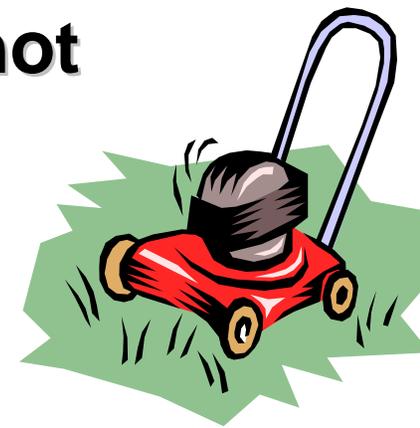
- **No storage in residential buildings**
- **Over 10 gallons**
  - **stored in flammable liquids storage cabinet**
  - **approved location**



# Miscellaneous



- Fueled equipment (in building, on balconies)
- Baseboard heater maintenance
  - Cadet recall
- Repairs and work using hot works - dangers
- Re-roof dangers



# Self-inspection Programs



- **Checklist**
- **Reference sheet**



# Using Fire Extinguishers



# The Fire Tetrahedron



**Heat**

**Chemical  
chain reaction**

**Fuel**

**Oxygen**

# Types of Fire Extinguishers



- **Water**
- **Carbon Dioxide**
- **Dry Chemical**
- **Halon**



# Dry Chemical



- Most common
- Multi-purpose
- 12-20 foot range
- 8-25 second discharge
- Extinguisher features



# When to Use a Fire Extinguisher



- **First priority - evacuate**
- **Call 9-1-1**
- **Only if the fire is small**
- **Fire won't block your exit**
- **You feel confident and know how to use a fire extinguisher**

# P-A-S-S



**P**ull the pin

**A**im at the base of the fire

**S**queeze the handle

**S**weep until the fire is out

**M**onitor fire so it doesn't restart

# Other Concepts



- **Buddy system**
- **Extinguishing fires outside**
- **Vehicle fires**
- **Personal extinguishers**
  - **home**
  - **vehicle**
  - **boat**

# Other Programs



- **Crime prevention**
- **Fall Factors - Senior Citizens**
- **CPR classes**
- **Fire Extinguisher Training**
- **Emergency preparedness**

# Resources



- **Consumer Product Safety Commission**
- **Washington State Emergency Management**
- **Kitsap County Emergency Management**
- **Federal Emergency Management Agency**
- **Red Cross**
- **Internet Web Sites**

# Acknowledgements



- **Thanks to Renton Fire Department and King County Fire District 40 for developing this program**
- **Re-designed for Bremerton by:**
  - Scott Rappleye*
  - Bremerton Fire Department*
  - 817 Pacific Avenue*
  - Bremerton, WA 98337*