

# High Rise Emergency Handbook

Fire

Civil Disturbance

Medical Emergencies

Earthquake

Severe Weather



Provided by the Bellevue Fire  
Department with assistance from  
the Bellevue Police Department

# City of Bellevue





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# Introduction

This handbook is intended to assist building owners, property managers and others who are responsible for emergency management. Emergency management is the process of preparing for, responding to and recovering from emergencies caused by the forces of nature, an accident, or an intentional act that constitutes a danger to life or property.

While fire prevention and preparedness remain the focus of this handbook, additional information is provided addressing other types of emergencies. This information should be used as a platform from which

to develop procedures addressing other types of disaster situations. Additional resources are listed at the end of each chapter to encourage further research into these types of situations.

Preparation is the key to an effective response to any emergency. An Emergency Operations Plan should not be developed under the stress associated with an emergency that is already underway. Although planning is a critical first step, training, drills and regular tests of building safety features and equipment are important tools.



# High Rise Fire Safety and Prevention

Fire is one of the most common risks to buildings, property and life safety. In order to minimize the risk and impact of fire, the Bellevue Fire Code outlines requirements for owners and managers of certain types of buildings and occupancies to develop and implement a Fire Safety Plan. Many buildings will already have an Emergency Operations Plan.

Equipment and procedures dealing with egress and exit facilities, fire alarm systems, voice communication systems, fire suppression systems and other life safety devices and features will play a major role in enhancing occupant safety in the event of a fire and/or explosion. Property owners and managers must ensure that these life safety features are maintained in operable condition and ready for use at all times.

The fire service, similar to most industries, learns from experience. There have been several fires that have changed attitudes about fire safety in our nation's high rise buildings. The fires briefly described below emphasize the merit of the safety standards now required of high rise buildings around the country.

## **1980 - MGM Grand Hotel Fire in Las Vegas, Nevada.**

Smoke from a small fire on the casino floor quickly spread throughout the building. Eighty five people died and 650 were taken to hospitals for smoke inhalation. This fire taught the fire service the importance of controlling the spread of smoke.

## **1988 - First Interstate Building Fire in Los Angeles, California.**

The exact cause of this fire was never determined. Building staff allowed this fire to grow unchecked for over 20 minutes by silencing the alarm three times before investigating the source of the alarm. This fire emphasized the benefit of central station monitoring of high rise fire and life safety systems.

## **1991 - One Meridian Plaza Fire in Philadelphia, Pennsylvania.**

Auto-ignition of oil-soaked rags started a fire that took the lives of three firefighters and injured many members of the custodial staff. Firefighters were forced to abandon the building due to failure of almost all components of the fire and life safety systems within the building. The fire, which started on the 22nd floor, was extinguished 14 hours later by sprinklers on the 27th floor. This fire highlighted the importance of confidence testing for fire and life safety systems and the effectiveness of sprinklers.

## **2001 - World Trade Center Towers in New York City.**

Hijackers deliberately crashed two 767 airplanes into the Towers. The ensuing fires led to eventual collapse of the Towers. Before the jet fueled fires caused collapse, 99% of the occupants below the impacted floors evacuated and survived. The Port Authority had previously updated its evacuation plan and took evacuation drills seriously. Among other lessons, the survivors of this disaster demonstrate the importance of regular and frequent evacuation drills.

## **Bellevue Fire Code 23.11.404.3.2**

Bellevue Fire Code 23.11.404.3.2 sets minimum fire and life safety standards for high rise buildings. In the City of Bellevue, a high rise is defined as any building with occupied floors 75 feet or higher, above the lowest level of Fire Department access. Simply put, this means most buildings over six floors are considered a high rise, with some exceptions.



The Bellevue Fire Code was written to prevent fire disasters from happening in Bellevue by requiring:

- Designated building staff trained to coordinate building response to fire emergencies.
- Regulated installation, maintenance and testing of fire and life safety systems.
- An Emergency Operation Plan outlining fire response procedures.
- Building staff trained to respond during a fire emergency.
- Tenant education regarding emergency evacuation procedures.

## Fire and Life Safety Systems

As each high rise building is unique, the fire and life safety systems installed within each building vary. It is important that building managers and engineers fully understand how the fire and life safety systems within their building operate. The following explanations are simplified. If you have questions regarding the specific functions of your buildings systems, contact the confidence testing company or fire alarm monitoring service contracted for your building.

### Fire Alarm System

**Initiating Device(s)** - Initiates fire alarm signal. Examples: smoke detectors, heat detectors, sprinkler flow switch, manual pull station.

**Monitoring Device** - Fire alarm panel, located in the building Fire Command Center. Normally located on the first floor of the high rise near the main entrance.

**Signaling Device** - Alerts building occupants to the alarm. Audible and visual alarms may signal on all floors (general alarm system) or only on floors in the immediate vicinity of fire (zoned alarm system). Examples: alarm horns, strobe lights.

**Zoned Alarm System** - Fire alarm systems programmed to signal alarm on a controlled number of floors. Zoned alarm systems provide for controlled evacuation of building occupants.

**General Alarm System** - Fire alarm sounds on all floors of the building. All occupants evacuate to the designated outside meeting place. This system is found in older high rise buildings.

**Voice Alarm** - System used for emergency announcements during alarm conditions. Messages can be either programmed as an automatic function of the fire alarm system or can be read by the Fire Safety Director during emergency situations.

**Central Station Monitoring Company** - 24-hour monitoring company contracted by property management to relay fire alarm information via 911 to the Bellevue Fire Department. Those buildings that have a 24-hour staffed fire alarm panel may be exempt from this requirement.

**Elevator Recall** - Upon activation of a smoke detector in the elevator lobby, the elevator shaft, or the machine room, the elevators are recalled to the building lobby. For all other fire alarm activations the elevators will continue to run as normal. Elevators are not to be used during a fire evacuation because elevators may fail and trap occupants or the elevator shafts may act as chimneys, allowing smoke to travel up the shaft and injure occupants.

**Exits** - All high rises have at least two exit stairwells, entered into through self-closing fire-rated doors. At least one of these stairwells will exit to the outside of the building. One stair may discharge to a street floor lobby.

**Automatic Door Unlocks** – In high rise buildings with phased evacuation, all stairwell doors must be unlocked when the building enters an alarm phase. This is accomplished by always leaving doors unlocked or having automatic “fail safe” doors that unlock immediately upon alarm activation, thus eliminating the chance of someone becoming trapped within a stairwell.

**Automatic Closing Doors** - Doors leading into stairwells are required to be self-closing, self-latching, and fire-rated. This reduces the probability of smoke and flame entering the evacuation route(s).

## Smoke Control

**HVAC (Heating, Ventilation and Air Conditioning) System** - Normal operations are shut down during alarm situations to limit spread of smoke throughout the building.

**Shaft Pressurization** - A system of dedicated fans that, upon alarm, pump air into stairwell and elevator shafts to create a high-pressure atmosphere. Pressurization inhibits smoke spread; thus helping keep evacuation routes free of smoke.

**Tempered Glass** - Windows designated by a three inch dot in the lower third of the window are installed for Fire Department use to vent smoke and heat from the floor. When broken, the glass breaks into many small pieces, instead of into large dangerous shards. Only a few of the older buildings in Bellevue have these dots on the windows.

**Emergency Generator** - On-site diesel engine generator is required in case of power loss. A generator will run for a minimum of eight-hours to power the fire and life safety systems.

**Standpipes** - Water pipe in high rise stairwells that supply water for firefighting operations and sprinklers.

**Sprinkler Systems** - Sprinkler systems are designed to control fires while relatively small. Each sprinkler head discharges separately once the heat in the room has melted the shunt, thus allowing water to flow.

## Portable Fire Extinguishers

**Portable fire extinguishers** - Required to be installed on the wall and inspected or serviced at least once a year. Portable fire extinguishers are designed to put out small contained fires and should only be used by trained persons after 911 has been called and evacuation of the immediate area has begun.

## Trained Building Staff

### Fire Safety Director and Alternate

The Bellevue Fire Department recommends that a Fire Safety Director and Alternate be appointed by the building owner(s) for all high rise buildings. Their primary responsibility is to manage fire emergencies from the fire alarm control center, then meet the responding Fire Department personnel as they arrive to assume control of the situation. Fire Safety Directors can be building engineers, maintenance or security staff, building and resident managers, or property managers who have been assigned primary responsibility for the fire and life safety procedures of a high rise building in the City of Bellevue.

The Fire Safety Director’s responsibilities should include:

- Scheduling maintenance and testing of the building’s fire and life safety systems.
- Maintaining the Emergency Operations Plan.
- Recruiting and training staff and/or tenants to perform the duties of floor wardens.
- Scheduling annual fire drills with the Bellevue Fire Department.

## Floor Wardens

The Bellevue Fire Department recommends recruitment of at least two floor wardens per floor from staff and tenants to facilitate the evacuation of their tenant space when the alarm sounds, a fire is discovered, or when instructed to do so. Floor wardens (resident volunteers) are recommended for residential condominiums and apartment occupancies that don't employ staff.

Floor wardens should participate in training at least once a year. As part of the emergency response team, floor wardens should be familiar with the emergency response plan and the roles of other members of the team. Floor wardens should know how to initiate a fire alarm if a fire is discovered prior to the activation of the building alarm system. Floor wardens should have a working knowledge of the evacuation plan for their floor, including the procedures for those persons unable to use exit stairwells. Floor wardens should be familiar with fire safety behaviors to follow during the course of a fire emergency.

In order to provide floor wardens with a sense of authority and to make them highly visible during evacuations, they should be given a hat, vest, etc. to wear during the evacuation process. Additional identification can be supplied by signage at the floor warden's desk or cubicle, or a list of floor wardens posted on the floor. It is also recommended that floor wardens be supplied with flashlights. These have proven to be helpful in previous emergency evacuations of high rise buildings.

## Staff Liability

Protection from liability may be provided under state law if floor wardens are assigned in accordance with a predetermined plan; appointed by a fire chief during the emergency and/or; don't commit an act of gross negligence or wanton misconduct.

The law reads: No building warden, who acts in good faith, with or without compensation, shall be personally liable for civil damages arising from his or her negligent acts or omissions during the course of as-

signed duties in assisting others to evacuate industrial, commercial, governmental or multi-unit residential buildings or in attempting to control or alleviate a hazard to the building or its occupants caused by fire, earthquake or other threat to life or limb. The term "building warden" means an individual who is assigned to take charge of the occupants on a floor or in an area of a building during an emergency in accordance with a predetermined fire safety or evacuation plan; and/or an individual selected by a municipal fire chief or the state fire marshal after an emergency is in progress to assist in evacuating the occupants of such a building or providing for their safety. This section shall not apply to any acts or omissions constituting gross negligence or willful or wanton misconduct. (RCW 4.24.400)

## Emergency Operations Plan

The basic objectives of an Emergency Operations Plan (EOP) are:

- To set forth the functions and activities of your staff during an emergency.
- To make sure that these activities integrate with responding firefighters and are not counterproductive during the fire control phase.
- To serve as an information resource to the Fire Department during an emergency.
- To maintain documentation regarding all required tests of the building's fire and life safety systems.

An EOP must present required information in a consistent and recognizable format to be useful to building staff and to firefighters. Building staff will be able to use this document as a guideline for scheduled training exercises and building fire drills. Firefighters will use this document as a training tool to familiarize themselves with the functions of building fire and life safety systems and evacuation procedures prior to an emergency response.



One copy of the approved Emergency Operations Plan should be located at or near the Fire Alarm Control Center of your building. The EOP should be kept current and reviewed regularly as specified within the plan.

The following information describes what information should be contained in an EOP and how this information should be organized. Emergency Operations Plans should be stored in a three-ring notebook with page dividers separating sections.

## Introduction

For reviewing purposes it is helpful to have a brief description of the building included. This description could include information regarding a floor by floor breakdown of occupancy type(s), as well as details about any special hazards present due to building design, tenant, or neighboring buildings/structures.

## Section 1. Responsibilities

### Building Management

Provide the contact information for those members of building staff assigned responsibilities during and after a fire emergency, including the building manager and building engineer.

### Training

Provide schedules and detailed procedures used to establish an ongoing emergency training program for all building fire safety personnel. Describe areas to be covered and the frequency of the training for management staff, maintenance/engineering staff, security staff, and all other staff. Maintain complete training and testing records for all staff and tenants including fire drills.

### EOP Maintenance

Outline the scope and frequency of methods that will be used to keep the Emergency Operations Plan current.

## Section 2. Fire Reporting

### Automatic Fire Reporting Systems

List the types of systems/devices that will activate the alarm. Indicate all emergency control panel locations. List the location of the primary control panel. Include contact information for the alarm monitoring company. Outline the actions of the Emergency Control Center attendant to the activation of each automatic system.

### 911 Notification

Indicate which staff member or position notifies the Bellevue Fire Department of an alarm situation. To facilitate the reporting process the caller must be prepared to provide information as it is requested (nature of emergency, correct building address, specific information regarding the source of alarm). The assigned staff member should also be instructed to stay on the phone until instructed to hang up and to provide all specific information known, i.e. floor number, details of emergency, etc.

### Nuisance/False Alarm Reporting

Upon discovery that an alarm situation is either a nuisance or false situation the designated staff person should call 911 to report the alarm status to the 911 dispatcher. Fire apparatus will still arrive to verify that a false/nuisance alarm has been indicated. The alarm shall not be silenced or reset unless specifically authorized by a Chief Officer in the Bellevue Fire Department. Silencing an alarm may place building occupants in harms way because a fire may actually be occurring. After a thorough investigation, Fire Department personnel may silence the alarm after determining the alarm initiation was not due to a fire. Resetting an alarm may “erase” information needed to troubleshoot an alarm system problem.

## Section 3. Evacuation

### Evacuation Methods

Procedures will differ depending upon the type of building and fire and life system installed. The Bellevue Fire Code requires the fire alarm to sound at a minimum on the fire floor, the floor above, and the floor below. The alarm may sound on more floors in your building depending upon how the fire and life safety system has been programmed and the age of the system. In buildings that are 10 stories and shorter, the alarm will sound on all floors in the building and the entire building will evacuate. The evacuation instructions in the EOP must address whether building management will conduct a controlled or general evacuation of the building and will provide detailed descriptions of the recommended evacuation procedures for building occupants.

### Phased Evacuation Method

A zoned alarm provides control to the evacuation process by allowing those occupants closest to the detected danger to move to safety first. If the situation escalates, the alarm system will respond appropriately by increasing the numbers of floors in alarm as necessary. Due to the sophistication of fire protection systems and the installation of sprinklers in newer high rise buildings there is no immediate need to evacuate more people than are directly threatened. If every person were to evacuate at the same time stairwell pressurization could be lost when all doors open at the same time. Evacuating all floors at once may create serious backups in the stairwells which could cause frustration and anxiety, as well as impede firefighters' ingress.

Recommended instructions for a zoned alarm system instruct occupants to evacuate the floor using the stairwells, go down four (4) floors, reenter the building and await further instructions. Do not enter a floor where the alarm is sounding. Instead continue down until you reach a floor that is not in alarm. The bottom five (5) floors evacuate to a designated meeting area outside of the building.

### Full Building Evacuation Method

If the building fire alarm system activates on every floor of the building when a fire is detected, all persons must evacuate together. In this situation floor wardens and occupants should be well trained to understand the procedures, including the importance of going directly to and staying at the designated outside meeting place in order to conduct a head count. The designated meeting place should be located far enough away from the building to protect tenants from hazards of falling glass and debris, and to provide firefighters on scene room to conduct operations unhindered.

Non-ambulatory evacuation procedures: Describe the people, methods, procedures, etc. to facilitate evacuation of people that are unable to leave the affected area without assistance. Floor wardens should assist with the appointment of persons to assist each individual whose limited mobility would prevent their evacuation by way of the exit stairwells. This should be done before a fire emergency so that all persons involved will have time to become familiar with their course of action. Affected individuals should be instructed to shelter in the stairwells and call 911 to advise their location in the building and the conditions in the area.

This section should also provide information regarding suggested areas of refuge that may be used during a fire emergency if the stairwell is not available or safe. An area of refuge is a totally enclosed room with a telephone and window. The telephone can be used to call 911 and give notification of your location if you are in immediate danger.

Non-ambulatory evacuation procedures will differ depending upon the type of occupancy.

### Nonresidential Buildings

The following instructions assume that the individual is a regular occupant of the building, and that a co-worker has agreed to assist with evacuation. Both individuals should wait near the exit stairwell until all

persons on the floor have evacuated and traffic in the exit stairwell has cleared. Once the floor is clear they should enter the stairwell and wait on the landing for further instructions or assistance. Make sure that the door is securely closed and that a floor warden is reporting to the Building management team or arriving Firefighters. Firefighters will be sent to assist with continued evacuation as necessary. If traffic in the exit stairwell builds from the evacuation of upper floors, re-enter the floor to allow others to pass and the stairwell to clear. Assistant(s) should not attempt a carry unless conditions in the stairwell become threatening. If conditions do deteriorate, the assistant(s) can then perform a carry down the stairs to a safer area. If there is no one to assist or if there are too many individuals to wait on the landing, an area of refuge should be sought on the floor.

In the event that a visitor to that floor is in need of evacuation assistance, floor wardens need to be prepared to provide the necessary assistance.

## Residential Buildings

In residential occupancies, tenants unable to use exit stairwells are best advised to stay in their apartment units with the door securely shut. If the fire is in the tenant's apartment, the tenant should leave their unit shutting the door behind them and either go to a neighbor's unit or wait on the stairwell landing.

If a tenant hears the fire alarm and the fire is not in their unit they should close as many doors as possible. Closed doors will slow down the spread of smoke and flames. Place towels or pillows at the bottom of the door to fill any space that smoke may come through. Sit as close as possible to the floor where the freshest air will be and wait for further assistance. Don't break windows, this could allow smoke from outside the building to enter. Placing something colored and noticeable in the window may help notify the Fire Department of your location. If smoke begins to enter the unit, call 911 from the phone and report the situation to the dispatcher.

These instructions are very important. If stairways and halls are filling with smoke, tenants must remain in their units and not attempt a risky escape. With permission, the names and locations of those tenants that are unable to use stairs to exit can be kept on a roster stored at the fire alarm panel. This roster can then be easily accessible to the Fire Department in order to provide assistance to these residents when necessary.

## Floor Wardens

Maintain a roster of those persons assigned the duties of floor wardens; include their floor or zone assignments. Provide an outline of floor warden responsibilities during an emergency which should include: assist with the evacuation of their floor by conducting a sweep of all areas, close doors while sweeping the floor, coordinate the evacuation of those unable to use exit stairs and report any problems to the Fire Safety Director or available fire department personnel.

Even though floor wardens are not required in residential occupancies without staff, the Bellevue Fire Department strongly encourages floor wardens to be recruited from the tenants of high rise residential buildings. As the floor wardens are evacuating the building they can assist their neighbors.

## Emergency Messages

It is important to let tenants know what is happening in their building during an emergency. Use the voice alarm system during emergency situations to keep building occupants informed. After the fire alarm situation is ended, notify all tenants of the situation and its resolution. These communications will provide real life educational opportunities for tenants regarding fire emergency procedures.

Develop scripts of different emergency messages for your building. These messages can either be read or programmed into the building's fire and life safety system. You may wish to develop emergency messages for the following situations: floors in alarm, floors not in alarm, investigating alarm, all clear. Include copies of these messages in your EOP.

## Tenant Orientation Handout

Include a copy of the Tenant Orientation Handout describing what will happen during an emergency, what evacuation routes and procedures a tenant should follow, and the location of the designated outside meeting place. Describe how and when this information will be given to all building tenants.

### Section 4. Owner's Fire Control Procedures

#### Building Staff Responsibilities

Include outlines of all procedures to be followed by the Building Engineer and other trained building staff during a fire emergency. Describe who, what, when, where, and how assigned individuals will complete their assigned tasks.

- **Fire Safety Director:** Report directly to the emergency control center; meet the responding fire department personnel, etc.
- **Other Staff:** (Alternate Fire Safety Director, Engineering and Management personnel) Transmit prepared emergency evacuation instructions via the voice alarm; investigate source of alarm; shut down utilities when necessary; notify off-site personnel necessary to return building to normal operations, etc.

### Section 5. Post Fire Operations

**Business Recovery:** Describe procedures for returning the building to operating condition once the fire is out and the emergency is over. List the contact information for all contracted individuals or companies responsible for the following: insurance carrier(s) for the building and for major tenants, security of any damaged area, building fire protection/detection service companies to return systems to normal operation, and debris removal.

### Section 6. Building Equipment Testing

**Confidence Testing:** List the systems and equipment subject to confidence testing requirements. Include the required frequency of testing and any pertinent information, such as testing company, records, etc.

### Section 7. High Value List

Provide a list of areas that contain high value materials susceptible to water damage, assembly rooms, and rooms containing above average amounts of combustible or hazardous materials.

### Section 8. Shut-Off Valve List

List the locations of all utility shut off valves including water, power; gas, and sprinkler system main and sectional valves. Describe any unusual operating techniques. List all locked out floors and the location (accessible to the Bellevue Fire Department) of the master keys, if necessary.

### Section 9. Floor Plans and Site Plans

Provide a copy of each unique floor plan showing the type of occupancy in each tenant area. Floor plans should indicate areas of open office space, retail space, labs, closed office configurations, garage levels, mechanical rooms, etc. and should have a directional indicator. One floor plan marked accordingly can be submitted for similar floors.

Floor plans must also include the locations of the following:

- Primary evacuation routes.
- Secondary evacuation routes.
- Accessible egress routes.
- Areas of refuge.
- Manual fire alarm boxes.
- Portable fire extinguishers.
- Fire alarm annunciators and controls.
- Occupant-use hose stations.



A site plan must also be submitted and should indicate the following:

- The exterior assembly point for occupants.
- The locations of fire hydrants.
- The normal routes of fire department vehicle access.

## Fire Drill and Other Tenant Training Requirements

It is the responsibility of the Fire Safety Director to develop methods to inform building occupants about emergency procedures and to provide training on these procedures. Building management staff and tenants who understand their role in a fire emergency will be better able to respond when the fire alarm sounds. Floor wardens who understand their responsibilities during evacuation will be better resources for their coworkers. Building occupants who understand the evacuation procedures are more likely to participate in fire drills.

### Conducting Drills

Fire drills are required a minimum of once a year in high rise buildings in Bellevue. The drills should be conducted in accordance with procedures set forth in the building's Emergency Operations Plan. All building staff and tenants should participate in drills coordinated by building management in cooperation with the Bellevue Fire Department. Even though residential occupants are not required to participate they should be encouraged to do so.

Fire drills are intended to test both the level of staff emergency preparedness and the evacuation procedures during a fire alarm situation. It is important that building staff fully understand their role in the event of a fire alarm and know what to do if the Fire Safety Director is not in the building. It is equally important that the evacuation procedures set forth in the EOP provide for an orderly and expedient evacuation.

Make your fire drills as realistic as possible. In a fire drill, building occupants should duplicate as closely as possible the actions they would take if a fire occurred. After building tenants have become familiar with the evacuation procedures consider varying the fire drill scenario to heighten interest and develop decision-making skills. To prepare building occupants for more realistic conditions, you may choose to designate a specific location for the "fire" and establish a scenario that would alter the basic fire drill procedures. A fire scenario can prepare building occupants for more realistic conditions requiring tenants to make decisions in response to lighting failure or exit stairwells blocked by smoke.

### Critiquing Fire Drills

Fire drills are an excellent method of testing the evacuation procedures set forth in the EOP.

Keep a logbook of drills and record any special situations or problems. It is also suggested that you also keep records of any tenants who choose not to participate in fire drills.

### Notification of Residential Tenants

Even though residents of high rise buildings are not required to participate in drills, it is recommended that you notify them when the audible alarms will be sounded for the fire drill. Invite residents to participate in the drill. Fire drills provide residents with an opportunity to practice their home escape plan and learn more about the fire and life safety systems.

### Fire Drill Apathy and Lack of Participation

The best tactic in gaining cooperation in drills is to explain the advantages of participation and obtain full participation from the organization's leadership. Establishing clear expectations from the top will create a corporate environment that promotes life safety. Under real fire conditions evacuation can be considerably more complicated. Fire drills are opportunities to fine-tune the recommended procedures and test new ideas.

Inform employers that liability for their employees increases if they do not allow or encourage participation. If a fire occurred and an employee was injured or killed, it is possible the employer may face legal issues due to their lack of support for fire safety and drills.

Another idea to increase participation could be to provide incentives (candy, coffee, cookies) to participants at their designated meeting place. These treats can take the place of awards for successfully evacuating their floor and taking fire safety seriously.

## Full Building Evacuation Drills

Since the attacks on the World Trade Center, many property managers are coordinating full building evacuation drills to provide building staff and tenants the opportunity to practice this difficult and time consuming process. The key to a successful evacuation is preparation.

- Staff must fully understand their responsibilities. Staff coordination will be extremely important in the event of a full building evacuation. If necessary, position building staff in areas where the evacuation may slow down.
- Floor Wardens and other tenants must be prepared for the experience of a full building evacuation. Provide training opportunities for building occupants to prepare them for the experience.

Evaluate the evacuation thoroughly in order to improve upon the written procedures and better prepare building staff for future drills. Take the time to talk with building staff and tenants about their experience. Document these concerns and address serious problems as soon as possible.

## Training Tools

- Information Bulletins that explain different aspects of Bellevue Fire Code requirements for high rise buildings.
- Teaching guides developed to assist in training opportunities.
- Handout masters to be copied and distributed to occupants within your building.

## For Additional Information:

Bellevue Fire Department, Fire Prevention Division,  
425-452-6872  
[www.bellevuewa.gov/firedepartment.htm](http://www.bellevuewa.gov/firedepartment.htm)

National Fire Protection Association  
[www.nfpa.org](http://www.nfpa.org)

United States Fire Administration  
[www.usfa.dhs.gov](http://www.usfa.dhs.gov)



# Emergencies Due to Human Activity

Emergencies arising from human activity can include situations instigated with criminal intent, human error, or industrial accidents. Criminal acts such as bomb threats have historically been one of the most common types of threats. However, recent public concern has also focused on threats associated with biological and chemical agents and potential terrorist activity. This section provides information relevant to emergencies due to human activity and some general information helpful for those responsible for developing emergency preparedness procedures.

## Work Place Violence

The circumstances of workplace violence vary and may include robbery-associated violence and retaliatory violence committed by disgruntled clients, customers, coworkers, employees, vendors, contractors and employers. Violence also enters the work environment through crimes associated with domestic violence and the deliberate violation of court orders. A planned response to incidents of violence in the workplace should be a part of every building's emergency procedures. Whether these incidents are random or related to situations of domestic violence, appropriate communications related to response and safe resolution are necessary to protect the intended target and the rest of the office from further disruption.

Security personnel, receptionists, complaint department personnel or other employees who are in a position where they may have to deal with violent or potentially violent people should be given training on conflict resolution and workplace violence. Several community colleges offer this type of training. Security measures designed to protect staff that may be vulnerable could be considered as a means of preventing or minimizing the impact of threats and occurrences.

You should always employ the highest practical level of physical security in your workplace. However, there will always be the possibility for a violent incident to occur. The following steps are offered as guidelines for

internal emergency response to workplace violence:

Contact local law enforcement by calling 911 and follow their instructions:

- Notify your private security force, if you have one.
- Move people away from the scene as quickly as possible.
- Secure the area if possible to preserve the crime scene for later investigation.
- Most importantly, STAY CALM.

## Domestic Violence

Employees should be strongly encouraged to immediately bring to the attention of supervisors and managers any issue that has the potential to create violence in the workplace. Any form of violence or threat of violence, whether actual or reasonably perceived, which involves an employee at work, or occurs in the workplace, must be reported to a supervisor, manager, or a representative from Human Resources. Such behavior should be reported whether another employee, a family member, a contractor, a customer, or a member of the public commits it.

This includes, but is not limited to, Court imposed orders such as No Contact Orders; Anti-Harassment Orders; Restraining Orders; and Protection Orders

Information voluntarily provided by an employee to the employer should be thoroughly sanitized to protect the privacy of the threatened party. A process should be developed to efficiently and effectively disseminate the information to front line staff that will be most likely to encounter the restrained or threatening party (the Respondent to the Court Order). This information should be posted in a readily available site that is updated and purged as necessary.

Staff should also be trained on how to respond and report incidents where respondents of Court Orders attempt to make contact or enter the workplace.

### For Additional Information:

U.S. Department of Labor, Occupational Safety and Health Administration, Safety & Health Topics: Workplace Violence, <http://www.osha-slc.gov/SLTC/workplaceviolence/>

Bellevue Police Department, Crime Prevention Unit  
(425) 452-6917

National Institute of Health, Managing Workplace Violence, <http://civil.nih.gov/whatis.html>  
Emergencies Cede to Human Activity

## Civil Disturbance

In the event of a civil disturbance, whether random or planned, procedures should be established and reviewed regularly with all property management and security staff. At a minimum, procedures should cover the following points:

**Closing** - Review emergency closing procedures with all employees. They should clearly understand the circumstances under which the building should be closed and their own specific responsibilities in an emergency closing. The Bellevue Police Department does not advocate automatic closure of businesses unless circumstances place building occupants at risk. The best way to restore order is to maintain activities as close to normal as practical. It is the goal of the Bellevue Police Department to assist property managers in their efforts to continue operating at customary levels of safety.

**Communication** - Establish a communication tree within your building and with neighboring buildings. If possible develop plans for mutual assistance.

**Exit Procedures** – Incorporate best practices into a coordinated egress procedure. If Civil Disturbances necessitate a closure of facilities it may be impractical for tenants to exit in their normal manner. Civil Disturbances often take on the form of human barricades, sit-downs and other disruptions to normal pedestrian and vehicular traffic.

### Watch Your Perimeter

If you receive prior notice regarding an event with the potential for civil unrest, inspect your perimeter, look for fire hazards, safety hazards, breaks in security, or materials that might be used to threaten security.

- Increase critical facilities and security staffing to improve your response to disruptive activity.
- Remind staff and tenants to maintain continuity of security by diligently adhering to security and access control procedures. Beware of “tail-gaters,” propped open doors, unscheduled vendors/contractors and unusual deliveries and packages.
- Remind staff and tenants of proper reporting procedures for suspicious activity and emergencies.
- Remove trash, pallets, and anything else that might break windows, cause personal injury, or start fires around the building. Lock trash containers and recycle bins and secure them to stationary objects.
- Chain newspaper boxes and other delivery boxes to stationary objects. If there are more than one at a single location, chain them together.



- If there are glass windows at street level, consider having 1/2-inch plywood on hand to cover them if they are broken. Alternatively, pre-arrange with a contractor to deliver and install glass or protective covers on short notice. Consider using security film and interior safety curtains to reduce the chance of breakage and to protect people from flying glass. Keep duct tape on hand for temporary repairs of minor cracks. Make sure window frames are strong enough to hold windows in place under stress.
- Light both the interior and exterior of the building. Check lights regularly. To the extent possible, arrange parking so that vehicles are fenced in away from the street and away from the building.

## When Emergencies Strike

Emergencies sometimes strike with little or no warning. When they do, safety is your first consideration. At the first sign of danger, move customers, guests, and employees away from all doors and windows at street level. Then lock all doors and leave lights on inside and outside. Call 911 and ask for assistance. Then contact responsible off-site managers and inform them of the situation. If it is safe to do so, remove product displays from windows and store them in a secure locked room.

## Safety First

Except for fires, people in hotels, motels, and office buildings are often safer inside than they would be outside. Consider a “protect in place” approach rather than automatically evacuating the building. When you judge that it is safe to leave the building, people should leave in groups, using exits away from areas where crowds have gathered or where there is a disturbance. Advise occupants to walk quickly, confidently, and directly to the parking lot or bus stop.

## Suspicious Package/Device

Building owners should review mail-handling procedures. Personnel that work in a mail room and/or personnel that accept and handle deliveries made by courier and other delivery methods should receive training on how to identify and handle suspicious packages. The extent of this training would correspond to the degree of risk related to the occupancy of the building (e.g. a commercial building containing foreign consulates would be at higher risk than a residential building.) The following information should be shared with occupants to assist them in identifying and responding to suspicious envelopes and packages.

### What Are the Characteristics of a Suspicious Package?

- Excessive, inadequate or missing postage; Inappropriate air mail or special delivery stickers.
- Postmark city/province/state does not match the return address; no return address.
- Handwritten or poorly typed addresses. Incorrect titles or no name; misspelling of common words.
- Excessive weight; excessive security material such as masking tape, string, etc.
- Restrictive markings such as “Personal”, “Confidential”, or “To Be Opened By”.
- Unprofessional wrapping, threatening markings on exterior of package.
- Oily stains, discoloration, odor, protruding wires or aluminum foil.
- Leaking any material whether it be in powder, granular, or liquid form.

If a package/device is suspect, occupants should leave the package/device alone. Do not move the package to another location. Leave the package where it is. Do not open, smell, examine, touch or taste any part of the delivery. Do not shake or bump it. Treat the package/device as suspect until otherwise proven.

### **If You Suspect a Package is Contaminated with a Chemical or Biological Agent**

1. Contain in clear plastic bag or cover with other materials. Minimize physical contact with other people. Wash your hands with soap and water.
2. Clear the immediate area where the package was discovered.
3. List all people who may have been in contact or close proximity to the suspicious package/device and provide this list to appropriate authorities.
4. Call 911 and notify supervisory staff regarding the location and description of the package.
5. Shut down the ventilation system servicing the area where the package is located so as to not spread potential contamination throughout the building.

If you have any reason to believe a letter or package is suspicious, do not take a chance or worry about possible embarrassment if the item turns out to be innocent.

### **For Additional Information:**

U.S. Department of the Treasury -Bureau of Alcohol, Tobacco and Fire Arms, Detect Suspicious Packages, <http://www.atf.gov/press/breakingnews/threat.htm>

United States Postal Service, What Should I do if I Receive an Anthrax Threat by Mail?, <http://www.usps.com/cpim/ftp/pubs/pub166.pdf>

## **Bomb Threats**

Bombing and the threat of being bombed are harsh realities in today's world. Bombs can be constructed to look like almost anything and can be placed or delivered in any number of ways. The probability of finding a bomb that looks like the stereotypical bomb is almost nonexistent. The only common denominator that exists among bombs is that they are designed or intended to explode.

Through proper preparation, you can reduce the accessibility of your business or building and identify those areas that can be "hardened" against a potential bomber. Proper planning can also reduce the threat of panic, the most contagious of all human emotions. In the context of a bomb threat, panic is the ultimate achievement of the caller. If a bomb incident occurs, proper planning will instill confidence in the leadership, reinforce the notion that those in charge do care, and reduce the potential for personal injury and property loss.

### **What Should Occupants Do if They Receive a Bomb Threat?**

Occupants should have procedures to follow in the event they receive a bomb threat by telephone. Instruct all personnel, especially those at reception or working a telephone switchboard, what to do if a bomb threat call is received. These procedures should remind the receiver to document as much information as possible and to remain calm. The caller is the best source of information about the bomb. Keep the caller talking as long as possible and ask them to repeat information as it is given. Write down what the caller says and any other information that seems notable. Many organizations have created Bomb Threat checklists that provide questions to ask and room to note characteristics about the caller's voice and any background noises.

If a written threat is received all materials should be saved and unnecessary handling should be avoided. These materials may prove useful to investigators when identifying the threat and the writer.

## Decision Time: Evacuate, Search, Ignore

Essentially, there are three alternatives when faced with a bomb threat: ignore the threat, evacuate immediately or search and evacuate if warranted. The most serious of all decisions to be made by management in the event of a bomb threat is whether to evacuate the building. Calling 911 to report the situation to the Bellevue Police Department will assist building management and security staff with this decision process. Ignoring the threat completely can result in problems. While a statistical argument can be made that very few bomb threats are real, it cannot be overlooked that bombs have been located in connection with threats. If employees learn that bomb threats have been received and ignored, it could result in morale problems and have a long-term adverse effect on your business.

Evacuating immediately on every bomb threat is an alternative that on face value appears to be the preferred approach. The obvious result of immediate evacuation is the disruptive effect on your business. If the bomb threat caller knows that your policy is to evacuate each time a call is made, he/she can continually call and force your business to a standstill.

Initiating a search after a threat is received and evacuating a building after a suspicious package or device is found is the third, and perhaps most desired, approach. It is certainly not as disruptive as an immediate evacuation and will satisfy the requirement to do something when a threat is received.

Employees and staff should be responsible for quickly and efficiently searching their own personal work spaces since they are most familiar with what belongs in the area. Each individual employee and tenant is best able to determine what is unusual and does not belong in their work space.

If a device is found, the evacuation can be accomplished expeditiously while at the same time avoiding the potential danger areas of the bomb. If the decision is made to search the premises, the search must be as speedy and as thorough as possible. Effective and efficient search techniques should be developed and made known to all relevant personnel.

### For Additional Information:

U.S. Department of the Treasury - Bureau of Alcohol, Tobacco and Fire Arms - Bomb Threats and Physical Security Planning, <http://www.atf.gov/press/breakingnews/threat.htm>

Risk Management Information Library, Bomb Threat Resources, <http://www.rmlibrary.com/sites/disbombt.htm>

## Weapons of Mass Destruction

In the event of a weapons of mass destruction incident, authorities will instruct you on the best course of action. The best way to protect the occupants of your building is to prepare for the possibility of an attack. Weapons of Mass Destruction (WMD) incidents include accidental or intentional releases of chemical, biological, or radiological agents such as the 1995 Sarin subway attack in Japan and the anthrax releases in 2001.

### Chemical & Biological Weapons

Chemical warfare agents are poisonous to people, animals, and plants. They can be released by bombs, sprayed from aircraft, boats, or vehicles, or used as a liquid to create a hazard to people and the environment. While potentially lethal, chemical agents are difficult to deliver in lethal concentrations. Outdoors the agents often dissipate quickly.

Biological agents are organisms that can kill or incapacitate people. Most biological agents are difficult to grow and maintain. Many break down quickly when exposed to sunlight and other environmental factors, while others such as anthrax are very long lived. They can be dispersed by spraying them in the air or infecting animals that carry the disease to humans as well as through food and water contamination.

### **What Are the Warning Signs of a Biological/Chemical Attack?**

- Unusual dead or dying animals in the area
- Unusual liquid sprays or vapors; low-lying clouds or fog unrelated to weather, clouds of dust, suspended or colored particles; unexplained odor
- Multiple victims displaying symptoms of nausea, difficulty breathing, convulsions, disorientation, or patterns of illness inconsistent with natural disease.
- People dressed unusually (long-sleeved shirts or overcoats in the summertime) or wearing breathing protection particularly where large numbers of people tend to congregate, such as subways or stadiums.

### **Nuclear and Radiological Attack**

Terrorist use of a radiological dispersion device or dirty bomb is considered far more likely than use of a nuclear device. These weapons are a combination of conventional explosives and radioactive material designed to scatter radioactive materials over a general area. These weapons appeal to terrorists because they require very little technical knowledge to build and deploy. Terrorist use of a radiological device would probably be limited to a single smaller weapon. The nature of the effects would be lethal but the area and severity of the effects would be limited.

### **What Measures Should Be Taken if a WMD Release Has Occurred Within a Building?**

All building occupants should know to contact their immediate Supervisor, Building Security and 911 to report all potential WMD releases. Emergency response personnel will assume command of the incident upon arrival and may require additional steps be taken to isolate affected persons and the impacted areas. Until their arrival the following steps will assist in your coordination of activities during and after a suspected WMD release.

- Contain and maintain control of the material to minimize the impacted area and number of individuals exposed by isolating impacted area(s); e.g. shut door during exit. Do not allow any unprotected persons into the area. Shut down HVAC system (heating and ventilation system) for impacted and adjacent areas.
- Contain the potential impacted individual(s) to ensure that they receive proper medical attention. If material is released, impacted or potentially impacted individuals should move from the immediate area to an adjacent control room. Minimize activities until appropriate response personnel arrive. If absolutely necessary, move impacted individuals into nearest bathroom facility on the floor.
- Try to contain exposed or potentially exposed people so that they can be helped by emergency professionals on scene. Try to prevent exposed people from leaving the immediate area. If they leave, they may further spread contaminants to vehicles, homes and hospitals.
- Evacuate non-impacted individuals from the area as quickly as possible and wait further instruction from response team. If evacuation to the outside is not possible, move occupants upward to an interior room on a higher floor since many agents are heavier than air.



## For Additional Information:

FEMA Produced Booklet, Are You Ready?,  
<http://www.fema.gov/pdf/areyouready/security.pdf>

The Council on Foreign Relations, Terrorism Questions and Answers, <http://www.terrorismanswers.com/weapons/dirtybomb.html>

PBS, NOVA Series: Dirty Bomb, <http://www.pbs.org/wgbh/nova/dirtybomb/>

Center for Disease Control, Biological Diseases and Chemical Agents, <http://www.bt.cdc.gov/Agent/agentlist.asp>

Seattle/King County Public Health Department, Bioterrorism Response Protocol, <http://www.metrokc.gov/health/bioterrorism>

## Hazardous Material Accidents

Building management will maintain a current inventory of hazardous materials used on-site including current Material Safety Data Sheets (MSDS) as required by the Workplace Hazardous Material Information System (WHMIS). Appropriate spill control and clean-up materials and equipment should be readily available. Staff should be trained in spill clean-up procedures for minor events. Emergency phone numbers for hazardous materials disposal companies should also be available.

The storage and use of hazardous materials, including flammable or combustible liquids may require a Bellevue Fire Department permit. Information regarding when a permit is required and how to apply for one may be obtained by calling the Bellevue Fire Prevention Division at 425-452-6872. If a permit has already been issued, review and ensure compliance with the conditions attached to the permit.

If possible, managers should determine what hazardous materials might be present on neighboring properties. A risk assessment of this exposure should also be carried out.

## What Can Building Management Do if a Hazardous Materials Accident Occurs?

- Call 911 to report the nature and location of the accident as soon as possible.
- Keep building occupants away from the accident scene.
- Do not walk into, touch, smell or taste any of the spilled substance. Try not to inhale gases, fumes and smoke, if possible; cover mouth with a cloth while leaving the area.
- Try to stay away from accident victims until the hazardous material has been identified.
- Try to stay upstream, uphill and upwind of the accident with clear access to an evacuation route.

Building owners and management should stress to occupants that removal, analysis and decontamination are the responsibilities of hazardous materials emergency response professionals who are trained and equipped to handle these types of situations. The Bellevue Fire Department may be able to assist with the initial containment and decontamination of an emergency scene. However, it may be the responsibility of building owners or managers to arrange with private companies that specialize in hazardous material handling for the complete clean up and decontamination of the site.

## For Additional Information:

Department of Transportation, Hazmat Safety Website, <http://hazmat.dot.gov/>

U.S. Environmental Protection Agency, Office of Pollution Prevention & Toxics, Publications for Citizens Concerned About Hazardous Materials, <http://www.epa.gov/opptintr/pubcitizen.htm>

U.S. Environmental Protection Agency, Office of Pollution Prevention & Toxics, Disposal of Household and Retail Hazardous Materials, <http://www.epa.gov/unix0008/news/news9697/nddispos.html>



## Medical Emergencies

Every building runs the risk of facing a medical emergency. However, there are certain types of properties where medical emergencies may be more common. Examples include properties that house senior citizens, the disabled, large public gatherings, and industrial activity. The Emergency Operations Plan should incorporate medical and first aid procedures that include:

- Emergency contact phone numbers
- Names and phone numbers of staff members with accredited training in lifesaving techniques
- OSHA Requirements

All tenant managers should understand the importance of notifying building security or the property management office if 911 has been called. With notification, a parking area in front of the building can be held and an elevator can be made ready for the emergency medical personnel.

Managers of buildings with large occupant loads may consider providing CPR training to staff and tenants, and purchasing automatic external defibrillators and medical oxygen in addition to basic first aid equipment.

## For Additional Information:

U.S. Department of Labor Occupational Safety and Health Administration, Safety and Health Topics: Medical and First Aid, <http://www.osha.gov/SLTC/medicalfirstaid/index.html>

Washington State Department of Labor and Industries, WISHA Policy and Technical Services: First Aid, [http://www.lni.wa.gov/wisha/p-ts\\_safety/firstaid.htm](http://www.lni.wa.gov/wisha/p-ts_safety/firstaid.htm)

# Emergencies Related to Natural Disasters

Emergencies due to sudden and powerful natural events are capable of inflicting considerable damage to property and placing many lives at risk. The Puget Sound region has a long history of natural disasters from windstorms to earthquakes, from floods to volcanic activity. While this region has survived many types of naturally occurring disasters, this section will focus on two; earthquakes and severe storms, and events related to these happenings.

Combined with stories of disaster in the Pacific Northwest are lessons of survival and recovery. These lessons form the basis from which the lessons of preparedness taught by emergency management professionals come from. This section will provide many ideas you can research to formulate safety and recovery procedures for the tenants of your building. Resources of particular note are listed below:

- The Federal Emergency Management Agency is an excellent source of information regarding natural disasters and other hazards. Information is available on their website at: <http://www.fema.gov/hazards/>
- Washington State Emergency Management has an emergency preparedness handbook with information for Washington State. Information is available on the City of Bellevue's website at: [http://www.bellevuewa.gov/pdf/Fire/Disaster\\_Prepareness\\_Handbook.pdf](http://www.bellevuewa.gov/pdf/Fire/Disaster_Prepareness_Handbook.pdf)

## Earthquakes

Typically, each year there are over 1000 earthquakes with magnitude 1.0 or greater in Washington and Oregon. Of these, approximately two dozen are large enough to be felt. These events offer us a subtle reminder that the Pacific Northwest is an earthquake prone region.

The Nisqually Earthquake of 2001 was a not so subtle reminder of what type of information earthquake preparedness plans should include:

- Removing or reducing hazards in the work-place.
- Training opportunities for employees and tenants to learn survival skills.
- Assessment tools for engineering staff to determine whether a building should be evacuated after the shaking stops.

## Reduce the Hazards

All building tenants should be asked to report any furniture or building fixture they see as a potential risk during an earthquake. Filing cabinets, bookshelves and computer equipment can be strapped to the wall to prevent it from falling on an employee during an earthquake. It may also be possible to move heavy items from high shelves to lower shelves for the same reasons.

## Training

Instruct occupants that it is very dangerous to try to leave a building during an earthquake because objects can fall on occupants. The decision to leave the building during an earthquake is dangerous due to the risk of injury from falling debris, collapsing walls and broken glass. Building tenants should be instructed to seek cover under their desks for the duration of the shaking.

- If an employee is inside when the shaking starts they should stay inside and seek cover under a desk or table to wait out the shaking.
- If an employee is outside when the shaking starts they should stay outside away from buildings, wires and poles that may fall during the quake.
- If an employee has just left a building they should go back inside to avoid being hit by any falling debris, glass, brick, signage, from the structures nearby.

After the shaking has stopped, employees should take a moment to check for injuries to themselves and others. Only call 911 if someone is trapped or has life threatening injuries.

## Evacuate or Not?

The decision to evacuate the building or not should depend upon the severity of damage to the building. Most high rises have been constructed to withstand the shaking, making them a relatively safe place to be during an earthquake. Older buildings may sustain damage to walls, stairwells and facades. If necessary building management can facilitate an evacuation once the shaking has stopped. Occupants should be evacuated using the stairs and moved quickly away from the building to prevent injury from falling debris, downed power lines and other hazards.

## For Additional Information:

Institute for Business and Home Safety, Protect Yourself: Earthquakes, [http://www.ibhs.org/natural\\_disasters/earthquake.asp?id=3](http://www.ibhs.org/natural_disasters/earthquake.asp?id=3)

## Severe Storms

Thunderstorms, hail, snow storms, high winds, and heavy rain can develop quickly and hit hard, posing a threat to life, property, and business continuity. Some problems cannot be prevented. High winds can topple trees and heavy rains can cause rivers to flood. But some damage can be avoided or at least reduced if precautionary measures are taken, such as knowing the type of storms common to your area and what time of year they are likely to strike.

## How Will Building Management Know if a Severe Storm is Approaching?

The weather service, the governor or other government official can activate the emergency-alert system to inform the public quickly about a life-threatening event. Regional Emergency Information can be heard on KIRO radio 710 AM – the primary station for the emergency alert system on the N.O.A.A. Weather Radio system (emergency alerts).

Emergency information should always be communicated to tenants as soon as possible. Property management staff should understand their responsibilities to make this happen in a calm and appropriate manner.

## Electrical Power Failures

During and after a storm backup generators and adequate fuel supplies may be very helpful in maintaining essential building services (e.g., lighting, heating). In buildings equipped with an emergency power generator, the equipment is tested and maintained in accordance with the Bellevue Fire Code. Pre-arrangements should be made to ensure additional fuel supplies could be made available upon demand, in situations where the power failure is for an extended period of time.

If your power goes out, check your electrical panel for a blown fuse or an open breaker. Call the Puget Sound Energy hotline at 1-888-225-5773 for a recording of all known outages. If your area is not mentioned, leave a message including your name, address, phone number and describe any unusual circumstances that could help identify the problem. Meanwhile, unplug small appliances. Do not call 911 to report a power outage.

## Landslides

Landslides are a common problem and increasing density has increased exposure. Many factors contribute to slides, including geology, gravity, weather, groundwater, wave action, and human actions. Typically, a landslide occurs when several of these factors converge. They are often triggered by ground water pressure so they tend to occur during wet winters following a heavy storm. Landslide and mudflows usually strike without warning. The force of rocks, soil, or other debris moving down a slope can devastate anything in its path.

Landslides may affect your business by impeding major transportation routes, disrupting utility service and damaging property or businesses your tenants rely upon.



## Flooding

Building management should assess the threat of flooding to their building. Usually this is easily accomplished due to a history of similar earlier events. Many insurance companies also have information on the potential for flooding in specified areas.

Where flooding is a potential risk, building management may wish to consider the following:

- Providing pumps, generators, sandbags, etc., for temporary flood relief.
- Moving hazardous materials stored at or below grade to a safe location.
- Protection of drinking water sources.
- Electrical hazards that may be created due to the presence of water (to both permanent and temporary wiring).
- Retaining a list of qualified personnel and contractors who can be contacted to assess and repair flood damage.
- Purchasing flood insurance.



# Appendices

## Appendix A: Developing Emergency Management Procedures

Every building has specific and unique emergency planning needs. These needs are determined based upon occupancy type, hazards based upon tenant mix, sophistication of the fire and life safety system and property management staffing. It is the responsibility of the building owner to make certain that the plan meets the needs of the building and the requirements of the Bellevue Fire Code.

### Step 1 - Establish an Emergency Management Team

Emergency management procedures are best developed with input from the various affected parties, analyzing risks and response capabilities, drafting and reviewing the plan, and implementing and refining the plan based on feedback and experience.

The property manager or an appointed designee should take the responsibility for organizing an emergency management team and developing procedures in cooperation with tenant representatives. It is beneficial to obtain input from building engineers, security officers and tenants. In multi-tenanted buildings many more parties will have to be involved.

### Step 2 - Analyze Risks and Hazards

The risks and hazards must be identified as well as the response capabilities that are available. Once the information has been gathered, a vulnerability analysis can be conducted to identify gaps in the facility's capabilities for handling emergencies.

The existence of external resources does not relieve building owners, property managers and occupants of their responsibility to provide for their own safety

in accordance with established plans during an emergency. During disasters or widespread emergencies, assistance from external resources may be severely limited or unavailable. It may help to identify external resources that may be called upon during an emergency. These could include:

- Police Department
- Social Service Agencies
- Fire Department
- Hazardous Materials Responders
- Emergency Medical Services
- Transportation Services
- City Emergency Management
- Utilities

### Step 3 - Develop the Procedures

Develop the emergency procedures using the most up-to-date information. Drawings, tenant information, contacts, etc. need to be current and accurate to be useful.

Review existing emergency procedures. In many instances they contain valuable practices and strategies for responding to, and dealing with various risks and threats. These could include: fire safety plan, current building floor plans, health and safety program, security procedures, shut-down procedures, or hazardous materials containment plans.

Identify applicable federal, provincial and community regulations and by-laws such as OSHA/WISHA regulations or the Bellevue Fire Code.

Identify internal and external resources and capabilities that could be utilized in an emergency:

**Personnel** - security, emergency management group, fire wardens or floor wardens, hazardous materials response team (where applicable), first-aid providers.

**Equipment** - communications, warning systems, security, emergency power equipment, containment equipment, first aid supplies, fire protection, fire suppression.

**Building Systems** - emergency features that can be operated from remote locations during an emergency such as HVAC, smoke control, communication, warning and security systems.

**Facilities** - evacuation routes, temporary shelter areas, first-aid stations, decontamination facilities.

**Organizational capabilities** - training, evacuation plan, employee or occupant support system, internal backup systems for communications, emergency power, recovery and support.

Before finalizing the plan, it is important for building management to consult with the local emergency response agencies (police, fire department, city emergency preparedness manager) to ensure that the procedures are well coordinated and integrated with local practices.

## Step 4 - Test the Procedures

Testing the procedures will involve training, practice exercises and evaluation. In single tenant facilities, the plan should become part of the corporate policies and be managed effectively. In multi-tenant facilities, the plan must be adopted by each tenant and be integrated into the workplace procedures for occupants to follow during an emergency incident. Key personnel in each tenant space may require special training or instruction to ensure they can conduct the assigned duties. Practice drills can be conducted to determine if the procedures and the desired communications are effective.

Once the procedures have been developed, occupant and tenant information must be distributed to increase awareness of the emergency procedures. Initially, occupants can be provided with printed instructions in a variety of formats including brochures, newsletters, workplace policies, workplace procedures,

etc. Other methods can be used to inform and train the building occupants. These may include:

- Offering periodic information and awareness presentations.
- Providing direct training and instruction to individuals who are assigned specific tasks.
- Producing and distributing demonstration or instructional videos.
- Distribution of specific procedures to each employee and occupant/tenant.
- Participation in evacuation drills intended to improve awareness of the egress features provided in the building.

Drills and exercises can be conducted in a number of ways. The exercise can be used to provide additional training for designated individuals by allowing them to become more familiar with the use of the building's safety features and communications protocol. For example, designated individuals responsible for communications should practice using the communication equipment and other equipment where applicable based upon the scenario to gain experience and confidence.

In addition to conducting full-scale drills or exercises, smaller independent exercises can be conducted at different times involving designated departments or specified areas of the building on different shifts. During these independent exercises, tenant managers, department heads, supervisors or other designated persons monitor the emergency response of employees in a specific area to a simulated or described emergency scenario. Employees respond to a simulation in accordance with their emergency procedures. These smaller independent drills and exercises provide an opportunity for assessing the adequacy of employee emergency preparedness on all shifts, in individual tenancies, departments or area-specific emergency procedures.



The frequency and nature of drills and exercises should be determined based upon code requirements, potential risks, and training needs. The purpose of conducting drills and exercises is to:

- Assess the ongoing effectiveness of the facility's emergency procedures given different scenarios and make corrections where necessary.
- Determine that staff members are trained and able to respond as outlined in the emergency procedures.
- Ensure that the building occupants understand how to react in accordance with the building's emergency response and evacuation procedures.
- Provide an opportunity for emergency response training and practice.

## Step 5 - Evaluate and Modify the Procedures

At least once a year, each drill or exercise must be evaluated and documented with recommendations for improvements by designated individuals who thoroughly understand the facility's emergency procedures and expected response by designated individuals and occupants. It is very important that all personnel with specific responsibilities attend a debriefing meeting following every drill. This meeting is held to review the procedures and reactions of all drill participants. During the debriefing, problem areas can be identified and, if necessary, solutions to overcome any deficiencies implementing the building's emergency management procedures can be discussed and corrected.

The creation of emergency management procedures is not a one-time activity. The document must be regularly reviewed and updated to reflect any changes to the facility or operations. One of the major shortfalls of most procedures is that the floor plans, tenant information, contacts, etc. are allowed to become inaccurate as a result of changes that invariably occur over time.

## For Additional Information:

U.S. Department of Labor – Occupational Health and Safety Administration, Evacuation Plans and Procedures eTool, <http://www.osha.gov/SLTC/etools/evacuation/index.html>  
 Appendices

## Appendix B: Property Vulnerability Assessment

Although emergencies could happen anywhere and at anytime, some emergencies are more likely to occur than others. While developing an emergency plan the following five factors should be assessed to ensure that risks specific to your building are appropriately addressed.

### 1. Geographic Location

Certain regions of the country are more prone to certain types of emergencies, particularly those relating to natural disasters. Fortunately for Bellevue, tornadoes and hurricanes occur less frequently here than in other geographic locations. However, severe winter storms and earthquakes that may result in flooding or structural damage occur on a regular basis. As such, the property manager must evaluate the likelihood of these events affecting the building and surrounding area in order to plan accordingly for those types of emergencies.

### 2. Immediate Environment

The neighborhood or community where your property is situated will influence the type of emergencies it may face. Buildings located in major urban areas face unique risks that are less likely to be found in rural areas. For example, riots and public demonstrations are more likely to occur in urban areas and may result in property damage and personal assaults. Similarly, buildings located in close proximity to major transportation routes or industrial



properties, such as nuclear power plants or hazardous petroleum/chemical plants, would be vulnerable if a major accident were to occur there. Therefore, the emergency plan should address potential emergencies that may occur as a result of an accidental leak or spill.

### 3. Property Type

The purpose for which the building is used has a direct bearing on the type of risks inherent to it. Residential towers, office towers, industrial plants, hospitals, theatres, and shopping malls all require their own unique emergency plans to address their particular situations and needs. All offer different challenges based on varying factors specific to their occupancy. The number of hours per day it is occupied, occupant load, building height, security levels, building contents, presence of hazardous products, and nature of activities are all examples of varying factors that must be taken into consideration when developing the emergency plan.

### 4. Tenant Mix or Resident Profile

It is important to realize that building occupants influence the emergency plan as much as the building type. Not all residential buildings are alike, nor are all commercial, industrial and institutional properties alike. Your emergency plan should take into account the various tenant profiles within the property to address their specific needs and risks.

Buildings that are occupied by politically sensitive organizations such as government offices, military establishments, religious organizations, embassies, cultural centers or abortion clinics have an increased likelihood of becoming a target of extremist groups. As such, the emergency plan should specifically address threats of violence, hostage situations or other emergencies.

### 5. Size and Construction

The size of the building with respect to height and area often determines the complexity of the emergency plan. Obviously, an office tower will require a more complex emergency plan than a single story commercial plaza. Whether the building is sprinklered or not will influence the Emergency Operations Plan, for example, by making it more or less viable to remain in the building in the event of a fire. The building's construction may also be critical in determining how well it will withstand a natural or human activity related disaster.

#### For Additional Information:

Factory Mutual Global, What is Risk Management?, <http://www.fmglobal.com/library/rmStrategies.html>

Hartford Insurance Small Business Center, Why You Need a Disaster Recovery Plan, [http://sb.thehartford.com/reduce\\_risk/disaster\\_recovery.asp](http://sb.thehartford.com/reduce_risk/disaster_recovery.asp)

## Appendix C: Business Continuity Planning

Part of the emergency planning for any organization should include ensuring the ability of the organization to continue to function with a minimum of disruption after a disaster. In the context of business continuity planning, a disaster is any event that could cause a period of total or partial interruption to normal business operations. This could be a fire or explosion or could be a much less dramatic event such as loss of power or telephone service.

In addition to the direct costs resulting from an incident, such as damage to the building or equipment, there are also many indirect costs. These could include loss of important data or business records, negative media coverage, loss of market share, dissatisfied customers or clients or legal action by regulatory agencies. Insurance may partially compensate for some of

the direct costs, but it will never cover all of the costs to an organization. It may also take many months or even years before an insurance claim is settled.

Although developing a business continuity plan does require some expenditure of time and financial resources, this expenditure should be looked at as an investment. In the long term, an effective continuity plan can save an organization a great deal of money and stress.

The first step in developing a continuity plan is to assess the various risks to which the organization might be exposed. After determining what risks need to be considered, each risk must be evaluated to determine the probability that it will occur and what impact it would have on the organization. The probability of occurrence and the impact can be assigned point values or a more general rating of high, medium and low. This will allow management to determine how many resources should be expended in guarding against the various risks.

Management then needs to develop strategies for addressing each of the risks. The first goal is to prevent the risk from occurring. Since not all risks can be prevented with 100% certainty, the second goal is to minimize the impact on the organization if the event does occur. At all times the safety and protection of employees must be the primary consideration.

The continuity plan must be in writing and every person who could be expected to exercise any part of the plan should have a copy. The plan should include phone numbers where critical people can be reached 24 hrs a day. The building owner, property manager, building engineer, etc. may not be available at the time an incident occurs and someone else may have to start exercising the plan.

### **For Additional Information:**

Federal Emergency Management Agency, Emergency Management Guide for Business and Industry, <http://www.fema.gov/pdf/library/bizindst.pdf>

Institute for Business & Home Safety, Getting Back to Business, <http://www.ibhs.org/docs/GBB.pdf>







**City of Bellevue Fire Department**  
**Fire Prevention Division**  
**[www.bellevuewa.gov](http://www.bellevuewa.gov)**  
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