

PREPE'S DISASTER PREPAREDNESS WORKBOOK



For Ages 12 and Older



The City of Vaughan is committed to the safety of its citizens.

The purpose of this work book is to educate youth on disasters and disaster preparedness.

It is everyone's responsibility to be prepared for disasters. It is important to **Take Action, Tune In and Know the Risks!**

This work book allows youth to work at their own pace to learn about disasters, mitigation, preparedness, response and recovery, which are considered the fundamental principles of emergency management.

Who is PrepE?

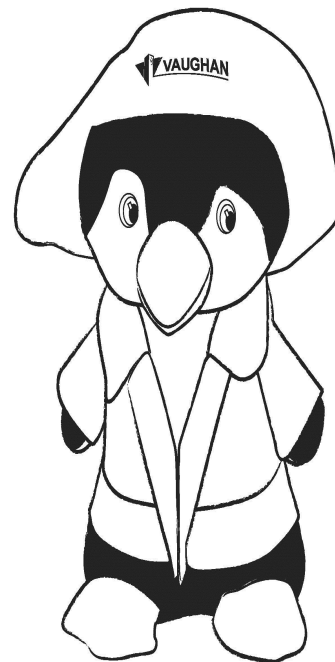
PrepE is the mascot for the Vaughan Emergency Planning Program. A penguin was selected because they are resilient birds that can survive in different climates; from the warm waters of the Galapagos Islands down to the extreme cold weather of Antarctica.

PrepE's mission is to be prepared for every emergency; everywhere; every time and to help you be ready too!!

PrepE's key messages are:

1. **Take Action:** Implement the necessary steps to be prepared including making a family emergency plan, making a home escape plan, identify meeting locations and putting together 72 hour kit.
2. **Tune in:** Monitor news and weather reports
3. **Know What Can Happen:** Find out what types of emergencies can happen in your community

PrepE will help guide you with knowledgeable facts and tips to better prepare your for the different kinds of disasters that could occur in the City of Vaughan.



PROGRAM OBJECTIVES

- To educate citizens about:
- Disasters that could happen in Vaughan
- Actions to take before a disaster occurs in order to be prepared
- Actions to take during an emergency to protect your safety
- Actions to take after an emergency to recover; and
- Emergency responders and the City's response procedures

PART 1

**KNOW WHAT CAN
HAPPEN: LEARN
ABOUT DISASTERS**



WHAT ARE DISASTERS AND EMERGENCIES?

Disaster is defined as any happening that causes great harm or damage. (Webster's Dictionary)

Emergency is defined as an unforeseen combination of circumstances or the resulting state that calls for immediate action. (Webster's Dictionary)

THE TYPES OF DISASTERS

1. Natural Disaster

- Results from the **forces of nature**
 - Examples include:
 - Tornado (Climate-based)
 - Earthquake (Geological)
 - Floods (Hydrological)
 - It can sometimes lead to secondary disasters
 - i.e. when an earthquake causes a dam to break, resulting to flooding in local communities.



2. Technological Disaster

- Results from failure or accidental failure of human-caused hazards
 - Examples include:
 - Chemical spills
 - Power failures
 - Train derailments
 - Plane crashes



3. Human-Caused Disaster

- Results from human actions that has negative intentions
 - Examples include:
 - Cyber hacking
 - Terrorism
 - Sabotage
 - Riots



STAGES OF AN EMERGENCY

Warning – This phase of an emergency **represents the time before the disaster takes place**. It is during this stage that we are able to **prepare for it**, and notification about the incident is released to the public.

Impact – This is when the **emergency occurs** and ranges from the initial impact through all rescue efforts. It is also known as the **Response Phase**; when all available resources are being used to help those who need it and restore the city's operations.

Recovery – This is **done immediately after the imminent threat is no longer present** and includes assessments of the damage, repair and rebuilding of the community. It can sometimes take years to resolve depending on the severity of impact and the amount and types of damage caused

DISASTERS IN THE CITY OF VAUGHAN

Hazard Identification and Risk Assessment (HIRA)

- Helps the city to prepare for the worst and/or most likely hazards
- Helps save time by identifying any hazards that will not affect the community
- Allows for the creation of emergency plans, exercises, training and public education based on the most likely and/or highest risk scenarios
- Build disaster resiliency in the community

There are 4 steps to create a HIRA:

1. Hazard Identification

- Review of all hazard categories and remove those that do not impact our community
- May require consultation with specific communities, government agencies, and review of historical records

2. Risk Assessment

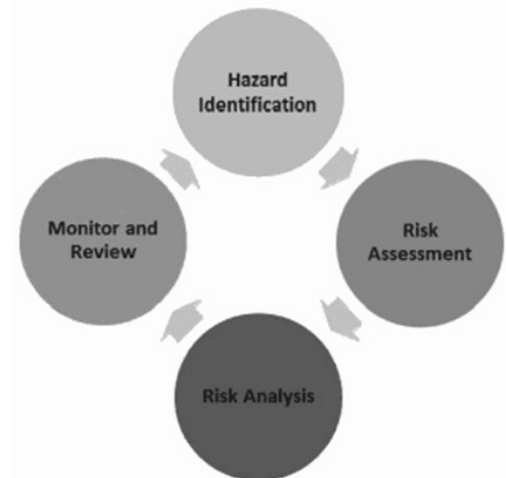
- Level of risks are examined
- Consulting with experts, researching past occurrences and possible developing disaster scenarios

3. Risk Analysis

- The data collected in the Risk Assessment step is analyzed to determine the degree of threat and ranked
- The rankings will determine the operating and planning priorities; higher the rank = high the priority

4. Monitor and Review

- It is an ongoing process and hazards must be monitored and reviewed annually
- Changes are based on emerging threats, new growth, and recent incidents



NATURAL DISASTERS IN THE CITY OF VAUGHAN

The natural disasters that can occur in The City of Vaughan include:

1. **Severe Summer Storms**
2. **Wild fires**
3. **Severe Winter storms**
4. **Sustained heavy rainfall**
5. **Tornado**
6. **Earthquake**
7. **Health Emergencies**

PrepE Facts!

The earliest entry on the CDD website is from April 26, 1900. It was a Non-residential fire that forced the evacuation of 15,000 people in and around Ottawa Ontario / Hull, Quebec area.

1. Special Weather Statement

- This is **the least severe** and is issued to let people know that conditions are unusual and could potentially cause concern. However, it is not serious enough at this time to issue a watch or warning.

2. Weather Watch

- This is **the second stage** of the warning system.
- A weather watch is used to alert you about weather conditions that could result in a storm or severe weather, and could lead to concerns for public safety.

3. Weather Warning

- Is **the most urgent** announcement and means that severe weather is either occurring or will occur in the affected area.
- Warnings are usually issued 6 to 24 hours in advance of the event, although some emergencies can occur rapidly, with less than a half hours' notice.

1. Severe Summer Storms

- Severe storm systems occur throughout the summer months generally occurring in localized areas
- These thunderstorms can be considered quite dangerous due to the production and intensity of lightning and heavy rainfall
- Lightning produces a large amount of energy which can cause severe burns to the human body and heart failure that can result to death

What to do when Outdoors

If you are outside during a summer storm you should get inside a solid brick building as quickly as possible:

- Do NOT take shelter under a tree or in a tent
- Stay away from objects that conduct electricity such as hydro poles, fences, flag poles
- Avoid being the highest point in an area
- Avoid riding a bicycle or any other form of transportation as you increase the risk of conducting electricity.
- If you are in a car, stay inside, but move the car away from trees or other structures that might fall on you.
- Avoid lakes, pools or any other bodies of water

What to do when Indoors

If you are inside during a summer storm **you should always avoid** the following items:

- Bathtubs
- Phones
- Doors
- Fireplaces
- Metal pipes
- Radiators
- Sinks
- Small appliances
- Stoves
- Windows



2. Wild Fires

- Wildfires can be best described as a fire burning out of control on a remote geographical range.
- There are many factors that can contribute to the generation and spread of wildfires, the most common are weather related.
- Wildfires can cause threats to life and extensive damage to the environment, and property

PrepE's Tips!

- Be aware of the following weather conditions and human actions as they may cause ignition and rapidly spread wildfires:
 - low humidity
 - dry thunderstorm
 - cigarette butts
 - open fires

Check for bans and fire conditions within the City and for the surrounding area.



3. Severe Winter Storms

- Before or during a winter storm, Environment Canada will let people know when a winter storm could develop by issuing a winter storm watch or warning.
- Winter storms can produce heavy snow, rain, ice, cold temperatures and strong winds.
- Winter storms are dangerous for many reasons; roads and sidewalks can become slippery trees and hydro poles/lines can topple due to ice, and power failures can occur

What to Do...

- Stay inside. Be prepared for possible power outages
- Check with your parents/guardian for school cancellations and school closures
- Never use a generator, grill, camp stove or other gasoline-burning devices inside a home, garage, basement, crawlspace or any partially enclosed area - this can cause carbon monoxide poisoning which can lead to death



4. Sustained Heavy Rainfall

- Sustained heavy rainfall can cause great damage to property and threats to human life in the form of flooding.
- It is important to tune into your local television, radio or online resources for updated information.
- You may be advised to evacuate by authorities.
- Keep your 72-hour emergency kit close by and evacuate the area immediately, following the direction of Emergency Services!



What to Do...

- Have a 72-hour Emergency kit on hand, full of food, water, medical supplies, etc.
- Move furniture, electrical appliances, livestock, equipment and other belongings to higher levels
- Remove or seal hazardous products like household cleaners or insecticides
- Remove toilet bowl water and plug basement sewer drains and toilet connection
- **Evacuate if your home is at risk of flooding**
- If evacuating **DON'T** travel through bodies of water

PrepE's Tips!

Taking the following precautions will help prevent and lessen the effects of flooding. It is best to have an adult or professional to do the following checks:

- Check the sump pump to see if it is working; have a back-up pump ready just in case
- Check to see that your eaves troughs, culverts and drainage ditches are clear
- Review your insurance policy to ensure you are adequately covered. Make sure you have coverage for sewer back-up
- Assemble a 72-hour Emergency kit in case of a flood
- Turn off power at panel, water supply, and natural gas if directed to do so

5. Tornado

- A severe thunderstorm is a driving force behind a tornado.
- **Hot, humid weather** combined with a **cold front** could be a sign that a tornado is forming.
 - A tornado may be accompanied by:
 - Lightning
 - High winds
 - Hail and heavy rain
 - There could be little to no warning that tornado is happening in your area, be alert!

What to do when Indoors

- Go to the basement or take shelter in a small interior ground floor room such as a bathroom, closet or hallway.
- Stay away from windows, outside walls and doors

What to do when Outdoors

- If you are driving and spot a tornado in the distance, try to get to a nearby shelter.
- If the tornado is too close, get out of your car and take cover in a low-lying area, such as a ditch or culvert.
- It is important to **lay flat and face down on the ground, covering your head with your arms.**
- **Avoid bridges and overpasses** as the wind can be accelerated through them; small objects such as sticks can become lethal weapons in a tornado's wind.
- If it appears to be standing still, it is actually coming at you



6. Earthquake

- Earthquakes are caused by a shifting of the Earth's plates at different depths.
- As the plates move they release a huge amount of pressure and energy which results in shaking of the surface of the Earth.

What to do...

- When an Earthquake occurs, act quickly by:
 - Drop down to the floor
 - Take cover under a heavy piece of furniture, such as a desk
 - Hold on the furniture
 - Remain where you are for 60 seconds after the ground stops shaking
 - Note any structural damage and exit the building if its unsafe

PrepE's Facts!

Moonquakes ("earthquakes" on the moon) do occur, but they happen less frequently and have smaller magnitudes than earthquakes on the Earth. It appears they are related to the tidal stresses associated with the varying distance between the Earth and Moon. They also occur at great depth, about halfway between the surface and the center of the moon.

<http://www.usgs.gov/>



7. Human Health Emergency Epidemic

- Health emergencies may be caused by the spread of communicable diseases and the contaminants in the air, food or water in a region.
- Everyone is very vulnerable to a human health emergency, although public health practices such as hand washing have slightly lowered the risk, the diversity and density of the population and our social nature allows for rapid spread of a contagion
- Depending on the cause of the emergency, a percentage of a community or region could become ill.

What to do...

- Follow the directions provided by Public Health and the Chief Medical Officer of Health.
- These directions are usually **announced through the media** and posted on York Region's website.
- The following are general prevention methods you can use to help protect yourself:
 - Keep up with your immunizations
 - Stay home if you are ill to prevent spreading the illness to others
 - Wash hands frequently and thoroughly with soap and water; if soap and water are unavailable, use an alcohol-based hand sanitizer
 - Cover your nose and mouth with a tissue if you sneeze or cough, or cough/sneeze into your sleeve
 - Regularly clean and disinfect commonly touched surfaces



TECHNOLOGICAL DISASTERS IN THE CITY OF VAUGHAN

Most technological disasters occur without warning. The technological emergencies that can occur in The City of Vaughan include:

1. **Transportation Incident**
2. **Industrial Installations**
3. **Cyber Risk**
4. **Major airport in and near the area**

1. Transportation Incidents

- A hazardous materials incident may occur on any transportation route.
- This is the unintentional release of materials that are considered to be hazardous to humans, animals, plants or the environment due to their explosive, flammable, combustible, corrosive, oxidizing, toxic, infectious or radioactive properties.
 - Example: Vehicle collision with a truck containing hazardous materials

2. Industrial Installations

- When properly contained and stored, hazardous materials are stable and safe.
- Every community has at least one facility that stores, produces or utilizes hazardous materials.
- These facilities include: water treatment plants, textile manufactures, dry cleaners, chemical manufactures and even schools.
- Depending on the type of hazardous material, it can become a threat when the container is ruptured, exposed to extreme heat/cold, exposed to fire, water or other substances that when combined produce a reaction.

What to do...

1. Stay indoors.
2. Close all windows, fire place dampeners and vents, and shut off heating and air condition fans to minimize contamination.
3. Move to the upper floors of your home to an interior room, seal vents with plastic sheets or garbage bags and duct tape, close blinds, latch windows, and place a damp towel at the base of the door.

PrepE's Tips:

Stay calm and tune into your local television, radio or online resources for up-to-date information. You may be instructed by local authorities to evacuate the area.

Keep your 72-hour Emergency kit close by and evacuate the area immediately!

3. Cyber Risk

- Cyber-attacks are a growing threat.
- As society's dependence on technology and computer systems have increased, so have the risk of cyber-attacks and hacking.
- Computer technology is used for a variety of important functions, such as water treatment plants, business transactions and the energy supply grid.



PrepE says to tell an adult if you are being harassed or bullied online.

Here are some examples of cyber risks:



- Hacking or the unauthorized use of computer systems and networks
- Computer viruses and spy ware
- Using a computer to steal information
- Fraud
- Harassment, bullying
- Defacing, altering or removing websites
- Obtaining sensitive documents

4. Major Airports in and Near the Area

- There are always aircrafts passing over the City of Vaughan at different altitudes
- Serious air transportation incidents involving large numbers of people are rare.
- This can result in
 - serious property damage
 - cause fatalities and serious injuries



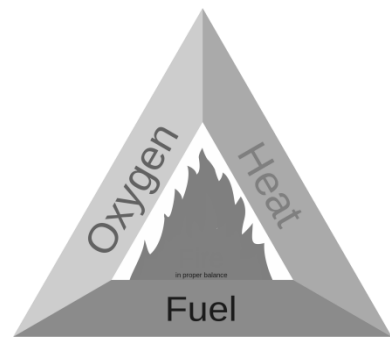
HUMAN-CAUSED DISASTERS IN THE CITY OF VAUGHAN

Human caused emergencies can be unintentional or deliberate. Some different Human caused emergencies include:

1. Fire
2. Public Order
3. Terrorism

1. Fire

- Fire is caused by the rapid oxidation of a combustible material in a chemical reaction. This results in the release of heat, light, and gas products.
- There are 3 basic components required for a fire:
 1. Heat
 2. Fuel
 3. Oxygen
- A flame will not develop and will be suppressed if any one of the components is absent.
- **Fire can spread very rapidly and has the potential to cause damage, serious injury, and even death. It should NOT be played with.**
- Some common fire hazards include:
 - Unattended cooking, such as frying, broiling, and simmering
 - Electrical systems that are overloaded
 - Combustible material near equipment that generates heat
 - Candles and open flames
 - Cigarettes and Cigar ashes



PrepE's Tips!

- Working Smoke Detectors and Carbon Monoxide Detectors (CO) - It's the law
- Have a smoke detector on each floor of your home
- Change the batteries twice a year (When the time changes, change your batteries)
- Replace your smoke detector every 10 years
- Check your smoke alarm every month
- Ensure you have a fire extinguisher in your home

2. Public Order

- Public order is a form of civil disorder and is also known as “rioting”.
- Typically it is a disorganized group of people acting out in rapid and intense violence against authority, property or people.
- This is usually attributed to “herd behavior”, that means people act the same as others in the surrounding area.

PrepE’s Tips!

- Read the newspapers and follow the news to be aware of impending protests, rallies, and marches.
- Being informed and avoiding the area is the best way to stay safe

3. Terrorism

- Terrorism is becoming more and more common throughout the world.
- Terrorism is considered to be any act of violence with the goal of instilling terror, and directly negatively impacting a population.

PrepE’s Tips!

- Be aware of your surroundings
- Move or leave if you feel uncomfortable if something does not seem right
- Take precautions when traveling.
 - Be aware of conspicuous or unusual behavior.
 - Do not accept packages from strangers.
 - Do not leave luggage unattended.
 - If you see something suspicious such as an unattended back pack or a person trying to access a restricted area **call 9-1-1 and report it!**



PART 2
TAKE ACTION :
GET PREPARED!



LET'S GET PREPARED

It is important to remember that the local responders may not be able to reach you immediately or in the initial stages of the emergency as they may need to focus their efforts elsewhere.

It is every citizen's responsibility **to be prepared and self-sufficient for at least 72 hours**.

A family emergency plan includes

1. **Emergency Information and Contacts**
2. **Home Escape Plan**
3. **72-hour Emergency Kit (grab and go bag) and a meeting spot.**



Step 1: Emergency Information and Contacts

Ready Alert—National Emergency Alerting System

- This system delivers immediate warnings via radio, television, email and SMS messaging when there is imminent danger from extreme weather, biohazards, terrorism threats or life-threatening threats

List of different sources to retrieve information in the event of an emergency:

- **Radio Stations**
 - Environment Canada Weather, Radio frequency: 162.4 - 162.55 MHz
- **News Stations** - List your News stations below
 -
 -
 -
- **Social Media**
 - Twitter: @City_of_Vaughan
 - Facebook: www.facebook.com/thecityofvaughan

| CONTACT | CELL PHONE | WORK |
|-----------|------------|------|
| Father | | |
| Mother | | |
| Aunt | | |
| Uncle | | |
| Neighbour | | |
| | | |
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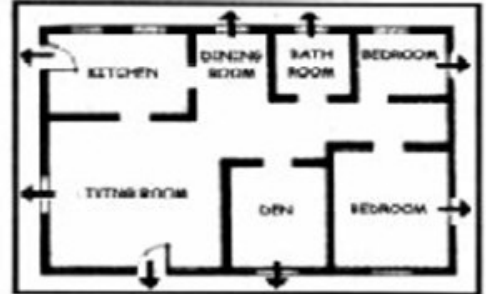
Step 2: Home Escape Plan

In an emergency you may need to evacuate on a moments notice. It is important to take action and to be prepared.

Using the grid below, draw a floor plan of your home.



**Plan your escape today...
your life may depend
on it tomorrow!**

A large grid for drawing a floor plan. The grid is 20 units wide and 20 units high. It is enclosed in a dashed border.

Step 3: 72-hour EMERGENCY KIT

Name: _____

Using the table below, create a checklist on the key items that you and your family would need in the event of an emergency. Ensure that your kit contains all the items needed to keep you comfortable for at least **72 hours** (3 days).

| FOOD & WATER | | |
|--|--|---|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none"> Foods that require no refrigeration preparation or cooking and little to no water Pack foods that are high in Carbohydrates; they provide quick energy for the body Peanut butter, crackers, granola bars, trail mix, etc. Comfort Foods: cookies, candy, instant coffee, tea bags, hot-chocolate (store extra water) Foods for infants, elderly, persons with special diets |
| WATER IS THE MOST IMPORTANT ITEM IN YOUR KIT! | | |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none"> Store up to 4 Litres/Person/Day 2 litres for drinking 2 litres for preparation/sanitation Store purification tablets, chlorine bleach, or a kind of water filtration system |
| FIRST-AID SUPPLIES | | |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none"> It is essential to include a first-aid in your family's 72-hour Emergency Kit It is also a good to have at least one person in your family certified in CPR & First-Aid (any class) |
| TOOLS & SUPPLIES | | |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none"> Tools & Supplies can include: <ul style="list-style-type: none"> Flashlights (Crank or Battery powered) Extra batteries (AA, AAA, etc.) Extra cash and car keys Radio (Crank or Battery powered) Candles, matches, lighter Important documents (passports, insurance, identification papers, etc.) Games, toys, puzzles Cutting tools Backpack/Duffle Bag to store all items of your emergency kit |

PERSONAL CARE ITEMS

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BABY'S SPECIAL ITEMS

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PET'S SPECIAL ITEMS

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OTHER ITEMS

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PART 3
**KNOW WHAT TO
DO**



LET'S GET INTO ACTION!

During an Emergency

When an emergency occurs, you may be required to **stay indoors or to evacuate**. The following sections will provide more information of emergency procedures and recommended steps to take.

Shelter in Place

Shelter in place means to **stay indoors!** Shelter in place may be a short or long period of time depending on the nature of the emergency. This may include staying in your home, school, or other building depending on your whereabouts when an emergency occurs.

Remember to **stay tuned** with the local authorities for further instructions.

Shelter in Place can happen when the following occurs:

- Chemical spill outside
- Epidemic
- Severe Storms
- Terrorism
- Public disorder

What to do...

- Make sure your family and pets are inside
- Lock doors, close windows, close air vents and fireplace dampers
- Tape all cracks around windows, air ducts, and vent systems
- Turn off fans, air conditioning and forced air heating systems
- **(adults only)** Turn off gas, water and electricity if directed to and **only** if you know how. Gas must be turned on by a professional.
- Take your emergency supply kit with you to your shelter room.
- Go into an interior room with few windows, if possible
- Seal all windows, doors and air vents with plastic sheeting and duct tape. Consider measuring and cutting the sheeting in advance to save time
- Stay away from windows and outside walls.
- Be prepared to improvise and use what you have on hand to seal gaps so that you create a barrier between yourself and any contamination.
- Local authorities may not immediately be able to provide information on what is happening and what you should do. However, you should listen to the radio or check the internet often for official news and instructions as they become available.
- Do **not** go outside unless authorities tell you to evacuate



During an Evacuation

During an emergency, you may also be advised to evacuate your home or neighbourhood depending on the nature of the situation and its potential threat.

Evacuation sites may include:

- Sheltering with friends or relatives outside the affected area; or
- Emergency shelter locations established by the city at our community centers

During the time you are advised to evacuate you will also be told of the possible locations of emergency shelters nearest you, and means of transportation as the city may utilize buses to transport people to the shelters. Local media and the city's website and social media sites is a good tool to access information from civil authorities.



It is important to **stay tuned** to a radio or check the internet for information on evacuation routes, emergency shelters, and procedures.

What do during an evacuation...

- **LEAVE YOUR HOME IMMEDIATELY!** Do not use up valuable time packing, take only your 72-hour emergency survival kit with you.
- Avoid using the phone or cell phones unless it is an emergency. Depending on the severity of the incident and where it takes place you may have difficulty finding service.
- Take your pet(s) with you and remember to bring your pet emergency kit.
- Keep listening to the radio and follow the instructions given by the authorities.
- As much as possible, carpool with your family and/or neighbours
- Do **not** attempt to pick up children at daycare or schools, these facilities will activate their emergency plans to care for the children.
- Lock your house and shut off your power and water if instructed.
- Follow the specified evacuation route, do **not** take shortcuts.
- If time permits, leave a note inside your home to inform loved ones of your location. Do **not** post a sign on your front door indicating where you have gone
- Register with the Red Cross at the emergency shelter, they will help reunite you with family and loved ones.

After an Emergency

After sheltering in place or evacuation the following actions should be considered regarding the physical aspects after an emergency:

- Keep tuned to local radio, television stations and internet sites for advice and instructions from municipal officials about medical help, emergency housing, clothing and food assistance.
- Drive only when necessary and where authorities direct. Streets maybe filled with debris and downed power lines.
- Stay clear of loose or dangling power wires and report them immediately to the local power company.
- Report broken gas, sewer or water mains to the municipality. An adult should check for gas leaks in your home
- If you smell gas:
 1. Immediately open windows and doors
 2. Turn off the main gas valve
 3. Leave the house
- Go to another location and notify the gas company and fire department
- Prevent fires! Don't use candles. Municipal water pressure and availability of personnel may be low, which will make firefighting even more difficult.
- Check refrigerated food for spoilage, don't risk eating spoiled food.
 - Refrigerate or freeze all leftover foods and use within 48 hours
- Stay away from flooded areas. Debris, broken glass, boards and nails will be everywhere. It is important to watch your step.



Coping with a Emergency

After an emergency you may experience different emotional reactions as a result of the traumatic event that can also lead to physical effects. It is important to recognize symptoms of critical incident stress that may arise after an emergency along with coping mechanisms to help a friend or family member in need.

Emotional reactions may arise after a disaster may be brought on by:

- Dealing with the emotional reactions of family members.
- Family and marital problems including domestic violence.
- Uncertainty about insurance coverage or the need to borrow money because of insurance shortfalls.
- Reconstruction strains and delays.
- The discomfort and lack of privacy of having to live in shelters, damaged homes, motels or with relatives.

Emotional Effects

- Fear or panic, confusion or poor concentration
- Anger, guilt, suspicion
- Denial, disbelief, grief
- Anxiety, agitation
- Withdrawal from family and/or friends
- Reoccurring thoughts, flashbacks, nightmares
- Difficulty making decision
- Need for information
- Reluctance to abandon property
- Rejection of outside help
- Depression
- Intense anger

Behavioural Effects

- Withdrawal
- Antisocial acts
- Inability to rest
- Intensified pacing
- Erratic movements
- Change in speech patterns
- Loss or increase in appetite
- Hyper alert to environment
- Increased alcohol consumption



Cognitive Effects

- Confusion
- Nightmares
- Uncertainty
- Hyper vigilance
- Suspiciousness
- Blaming
- Poor problem solving
- Poor attention/decision
- Poor concentration/ memory
- Disorientation of time, place
- Difficulty identifying objects or people



Physical Effects

Individuals may also have different physical reactions after a traumatic event.

- Rapid heart beating
 - Chills or sweating
 - Nausea or vomiting
 - Wakefulness or fatigue
 - Profuse sweating
 - Change in appetite
 - Increased sensory perception, hyper vigilance
 - Headache
 - Shaky hands
 - Visual difficulties
 - Grinding of Teeth
 - Headaches
 - Muscle tremors
 - Twitches
 - Thirst
 - Fainting*, Chest pain*, Vomiting*, Difficulty breathing*
- ** These symptoms require medical attention





FOR YOUR INFORMATION



There are a variety of different resources online that can help you and your family be prepared in the event of an emergency; some of those include:

Vaughan Emergency Planning

<https://www.vaughan.ca/PrepE>

Vaughan Fire and Rescue

<http://www.vaughan.ca/Fire>

York Regional Police

<http://www.yrp.ca/>

York Region Paramedics

<http://www.york.ca/wps/portal/yorkhome/health/yr/paramedicservices/>

Alectra

<http://www.alectrautilities.com>

Enbridge

<http://www.enbridge.com>

Weather Network

<http://www.theweathernetwork.com/>

Environment Canada

<http://weather.gc.ca/>

EMO (Emergency Management Ontario)

<http://www.emergencymanagementontario.ca/english/home.html>

Toronto and Region Conservation Authority

<http://trca.on.ca/>

FEMA (Federal Emergency Management Agency)

<http://www.fema.gov/>

NOAA (National Oceanic and Atmospheric Administration)

<http://www.noaa.gov/>



VIDEOS TO HELP YOU BE PREPARED



YouTube Videos and Channels

Vaughan PrepE Channel

<https://www.youtube.com/VaughanPrepE>

Bugout Channel

<https://www.youtube.com/user/bugoutchannel>

FEMA Channel

<https://www.youtube.com/user/FEMA/playlists>

The Weather Network

<https://www.youtube.com/user/TheWeatherNetwork/videos>

Canadian Red Cross

<https://www.youtube.com/user/canadianredcross/playlists>

Disaster Place Theater is from Kansas, USA and can be found at

www.preparemetrokc.org/

<http://www.youtube.com/user/PrepareMetroKC>

Each of these videos will be able to offer you helpful tips and ideas to prepare yourself in the event of a disaster.



**TAKE ACTION, TUNE
IN, AND KNOW THE
RISKS!**

PART 4
**TEST YOUR
KNOWLEDGE**



Code Breaker

Using the clues below find the corresponding letter to complete the public safety phrase.

Example, Y ← ↑ ↑ = J

- 1 W ↓ ← ↓ = ___
- 2 F ← ↓ ← = ___
- 3 T ↓ → ↗ = ___
- 4 S ↑ → → = ___
- 5 V ↓ ← ← = ___
- 6 H → → → = ___
- 7 P → ↑ → = ___
- 8 Z ↘ ↘ ↘ = ___
- 9 J ↓ ↙ ↓ = ___
- 10 B ← ← ↑ = ___

| | | | | |
|---|---|---|---|---|
| R | Z | T | A | M |
| P | D | B | J | X |
| H | K | U | I | W |
| S | E | F | V | Y |
| O | N | L | C | G |

- 11 L ← ← ↑ = ___
- 12 X ↓ ↓ ↓ = ___
- 13 N ← ↑ ↑ = ___
- 14 K → ↓ ↓ = ___

A L L

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 |

| | | | | | | | |
|---|---|---|---|----|---|----|--|
| | | | | | | | |
| 1 | 9 | 5 | 7 | 10 | 9 | 11 | |

I N V A U G H A N

A R E

D E S I G N A T E D A S

| | | | | | | | | |
|---|---|---|----|----|---|---|---|---|
| | | | | | | | | |
| 9 | 3 | 9 | 10 | 12 | 9 | 5 | 1 | 8 |

| | | | | | | | |
|----|----|---|----|---|---|----|----|
| | | | | | | | |
| 11 | 13 | 9 | 14 | 7 | 9 | 10 | 11 |



Mini-Tornado in a Bottle!

The purpose of this activity is to create and observe the actions of a Mini-Tornado inside of a bottle. This Mini-Tornado experiment offers an up-close look at how a tornado operates. This project can be constructed with readily available materials, and will only take a few minutes to construct.

Method

1. Fill one of the bottles with water until it is approximately half full. Add a few drops of food coloring to make the water more visible.
2. Cut a piece of duct tape which is 5 centimeters long and cover the mouth of the bottle which contains the water.
3. With the pencil, make a hole in the center of the duct tape. Make sure that the hole is a little bigger than the pencil.
4. Take the second bottle and turn it upside down on top of the bottle containing the water, so that the mouths of the
5. bottle line up. With the cloth or paper towel, wipe any moisture from the necks of the 2 bottles.
6. Cut more duct tape and wrap it around the necks of the bottles so they are firmly attached.
7. Hold the 2 bottles by the neck; invert them so that the bottle containing the water is on top, and immediately start spinning them in circles.
8. Put the bottles on the table, with the empty on the bottom.
9. Watch what happens

Materials

Two, 2 litre plastic soft drink bottles

- Water
- Food coloring (optional)
- Duct tape
- Scissors
- Pencil
- Ruler
- Cloth or paper towels

Observations

The water takes on the shape of a funnel and looks like a tornado.

Tornadoes are fast, violent swirling winds. In this experiment, the spinning of the bottles caused the water to take the shape of a tornado. The hole in the bottle allowed for the appearance of the tornado's tail; the most dangerous part of the tornado.

Experiment designed by Environment Canada



Word Search

Find the types of disasters by shading in the squares. The letters left over spell out a disaster related phrase.

Clues

- | | | | | |
|---------------|--------------|-----------|---------------------|----------------|
| AVALANCHE | DROUGHT | HAZARDS | PLANE CRASH | TERRORISM |
| BLACK OUT | EARTHQUAKE | HAZMAT | RADIATION | THREATS |
| BLEVE | EMERGENCY | HUMAN | RAIN | TORNADO |
| BLIZZARD | EPIDEMIC | HURRICANE | RIOT | TRANSPORTATION |
| CHEMICALS | EXPLOSION | ICE STORM | RISK | TSUNAMI |
| CONTAMINATION | EXTREME COLD | LANDSLIDE | SHIP WRECK | TYPHOON |
| CYBER | EXTREME HEAT | LIGHTNING | SINK HOLE | VOLCANO |
| CYCLONE | FAMINE | METEORITE | SNOW STORM | WAR |
| DAM BURST | FIRE | NATURAL | SOLAR FLARE | WATERSPOUT |
| DEPRESSION | FLOODING | NUCLEAR | SPACE JUNK | WILD FIRE |
| DERAILMENT | FOG | OIL SPILL | STORM SURGE | WIND |
| DISASTER | FOREST FIRE | PANDEMIC | STRUCTURAL COLLAPSE | |
| DISEASE | HAIL | PLAGUE | TECHNOLOGICAL | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | L | I | Z | Z | A | R | D | E | F | L | O | O | D | I | N | G | T | S | N |
| A | V | A | L | A | N | C | H | E | M | I | E | E | R | C | U | E | E | T | O |
| T | O | D | I | L | A | R | U | T | A | N | R | V | O | E | C | K | C | R | I |
| A | L | A | G | L | R | N | A | M | U | H | A | E | U | S | L | A | H | U | T |
| E | C | M | H | I | F | A | M | I | N | E | I | L | G | T | E | U | N | C | A |
| H | A | B | T | P | G | G | O | F | E | N | N | B | H | O | A | Q | O | T | T |
| E | N | U | N | S | M | S | I | R | O | R | R | E | T | R | R | H | L | U | R |
| M | O | R | I | L | A | N | D | S | L | I | D | E | C | M | S | T | O | R | O |
| E | E | S | N | I | R | H | U | R | R | I | C | A | N | E | H | R | G | A | P |
| R | U | T | G | O | A | C | H | E | M | I | C | A | L | S | I | A | I | L | S |
| T | G | E | P | I | D | E | M | I | C | R | E | B | Y | C | P | E | C | C | N |
| X | A | Y | N | O | I | S | S | E | R | P | E | D | M | A | W | D | A | O | A |
| E | L | D | E | R | A | I | L | M | E | N | T | T | O | I | R | N | L | L | R |
| N | P | C | O | N | T | A | M | I | N | A | T | I | O | N | E | I | R | L | T |
| W | I | L | D | F | I | R | E | P | A | N | D | E | M | I | C | W | A | A | S |
| S | I | N | K | H | O | L | E | E | S | A | E | S | I | D | K | A | W | P | U |
| C | Y | C | L | O | N | E | D | L | O | C | E | M | E | R | T | X | E | S | N |
| T | U | O | P | S | R | E | T | A | W | N | O | I | S | O | L | P | X | E | A |
| S | T | O | R | M | S | U | R | G | E | G | S | N | O | W | S | T | O | R | M |
| S | P | A | C | E | J | U | N | K | E | R | A | L | F | R | A | L | O | S | I |
| E | B | L | A | C | K | O | U | T | P | L | A | N | E | C | R | A | S | H | M |
| Y | C | N | E | G | R | E | M | E | E | E | R | I | F | T | S | E | R | O | F |
| N | O | O | P | H | Y | T | O | R | N | A | D | O | N | H | A | Z | M | A | T |
| K | S | I | R | T | T | H | R | E | A | T | S | R | E | T | S | A | S | I | D |
| H | A | I | L | M | E | T | E | O | R | I | T | E | S | D | R | A | Z | A | H |

EMERGENCY SHELTER SCRAMBLE

Unscramble the letters below to find the community centres that are designated as emergency shelters in the City of Vaughan.

LLNOIHRHTRON

TRONSUEOM

TAWGASENRMIIALL

RINARKEFDLCUF

LMPAE

GELLEVOLRLIVAE

DALPALIPAIN

GOWBIDOERD

TUFFNREAAONNOLHERMB

RCOHLALNCE



Public Safety Puzzler

Find the Phrase

Place the letters in the boxes below to find the public safety phrase, you may only use each letter in the column once.

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W | R | O | N | G | O | H | T | N | D | P | R | A | S | E | R | E | B | I | E |
| E | H | E | I | N | N | H | N | R | S | O | A | F | S | E | D | T | S | H | F |
| T | Y | E | R | M | D | I | O | E | S | E | A | S | I | T | D | R | T | E | G |
| S | T | | M | I | T | O | U | S | | | W | T | R | I | A | | H | | R |
| O | T | | | | | U | A | G | | | U | | T | O | | | | | |

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