

## **Emergency Response Plan**

### **11.0 Natural Disasters**

#### **Hurricanes Background**

Hurricanes are severe tropical storms with a well defined circulation and maximum sustained winds of 74 miles per hour or greater. Hurricane winds can reach 160 mph and extend inland for hundreds of miles. Even though hurricanes weaken rapidly as they move inland, the remnants of a storm can bring 6 to 12 inches of rain or more to the area it crosses. In 1989 Hurricane Hugo hit Charlotte, NC (which is 175 miles inland), with 100 mph gusts, downing trees and power lines and damaging buildings and homes. In 1969 Hurricane Camille dropped 27 inches of rain on Virginia causing severe flash flooding. Hurricanes cause damage and injuries through wind pressure, windborne projectiles, rain water and storm surge. Workers may be injured by breaking glass, and falling or flying objects. Electrical hazards may develop from loose wires or contact with water in the storm surge. The resulting floods can cause great damage and loss of life. In addition, hurricanes often generate tornadoes which add to the hurricane's destructive power. The hurricane season lasts from June through November. Hurricanes have been more frequent in New York during August, September, and October.

#### **Definitions**

Hurricanes are rated according to the following scale (Saffir-Simpson Hurricane Scale):

Category 1 (74-95 mph): Minimal damage to structures. Damage mainly to shrubbery, trees, and light structures, unanchored mobile homes. Four to five foot storm surge, flooding and small craft damage.

Category 2 (96-110 mph): Moderate damage to trees, roofs, and windows. Poor construction damaged or destroyed. Flooding and six to eight foot storm surge.

Category 3 (111-130 mph): Extensive damage to roofs and building structures. Trees blown down. Nine to twelve foot storm surge and serious flooding. Evacuation possibly required. Utility poles down.

Category 4 (131-155 mph): Extreme damage to trees, roofs, and buildings. Storm surge thirteen to eighteen feet. Major flood damage and erosion. Massive evacuation necessary for residents in low-lying areas. Utility poles snapped off.

Category 5 (Greater than 155 mph): Catastrophic damage. Buildings shattered or blown away. Massive evacuation essential. Storm surge over eighteen feet.

Gale Warning- Winds of 38-54 mph. Tree limbs may break, walking is difficult, signs and antennas may be blown down.

Hurricane Watch- A hurricane is possible within 24-36 hours. Hurricane conditions are possible. Tune to local radio and television stations for additional information. Prepare to take immediate action to protect people and property. An evacuation may be necessary.

Hurricane Warning- Hurricane conditions are expected within 24 hours. Take precautions at once. If advised, evacuate immediately.

Storm warning- Winds of 55- 74 mph. Trees may be uprooted, buildings may be damaged

Tropical Depression- An organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph.

Tropical Storm- An organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 39- 73 mph

## **Procedures**

### ***Before a Hurricane***

#### **1. Campus Safety**

- .Receive information from the National Weather Service in Albany and monitor radio weather broadcasts. The local voice of the National Weather Service NOAA weather radio can be found at (162.55MHz).
- Phone and/or fax information to Facilities Services.
- Notify the Vice President for Administration and the VP of Student Affairs, if warranted.
- Provide traffic control.
- Review evacuations plans and consider evacuation of the campus.
- Assist in warning the campus.
- Notify members of the Emergency Operations Center, if necessary.
  
- Inventory barricades and signs necessary for traffic control.
- Inventory spill equipment and confined space equipment.
- Ensure that the emergency van is stocked with appropriate supplies.
- Gas up the emergency van.
- Provide training to campus personnel concerning emergency response procedures.
- Move chemicals from the hazardous waste storage lockers to an inside location.
- Inspect buildings annually to ensure compliance with fire and safety regulations.

#### **2. Facilities Services**

- Contact employees who will conduct emergency operations.
- Inventory emergency equipment and supplies to ensure an adequate supply of pumps, generators, sandbags, tarpaulins, emergency lights, and cleaning supplies.
- Ensure that portable pumps, sump pumps, and emergency generators are operable. .Prepare for possible power outages and water shortages.
- Prepare for disruption of fire protection systems.
- Make arrangements with aseptic tank service, pump service, or fire department to pump flooded basements.
- Assist with an evacuation if necessary.
- Regularly inspect buildings for signs of deterioration that might increase the potential for damage during a hurricane.

- Remove or secure loose outdoor objects. Secure yard storage. Inspect roof mounted equipment and secure if necessary. Brace outdoor signs-
- Clear electrical and telephone lines of adjacent trees and overhanging limbs. Trim tree branches that are near buildings.
- If necessary, tape or cover glass windows and doors.
- Clear gutters, downspouts, and roof drains of debris. Inspect roof coverings. Assist personnel in moving equipment and supplies that may get wet.
- Fill above ground storage tanks-
- Gas up vehicles and fill fuel tanks of generators.
- Check tie-downs on trailers and hazardous waste storage lockers.
- Move outside drums of hazardous chemicals into a sheltered area-
- Check buildings under construction for loose debris-
- Identify key equipment that will need to be protected with waterproof covers.

### 3. Faculty, Staff & Students

- Know the terms used to describe weather related emergencies.
- Listen to radio and television for emergency weather broadcasts.
- If ordered to evacuate, leave immediately-
- Know evacuation routes from your building. Have an established meeting place. Conduct periodic evacuation drills.
- Know the location of emergency exits, fire alarms, and fire extinguishers. Only essential staff and faculty personnel should remain on campus. Students should remain in dormitories or off-campus housing.
- Prepare to move records, computers and other items that may become wet. Turn refrigerators and freezers to maximum cold and don't open unless necessary.
- Keep the gas tank in your car full.

## *During a Hurricane*

### 1. Campus Safety

- Closely monitor weather broadcasts for bulletins. Keep Facilities Management and executive staff informed.
- Monitor flooding of low lying areas and evacuate if necessary.
- Follow instructions issued by local officials.

### 2. Facilities Services

- Shut off gas and electrical power if necessary.
- Monitor flooding of the buildings and low lying areas and take appropriate action.

### 3. Faculty, Staff & Students

- Monitor radio and television broadcasts for progress reports.
- If advised to evacuate, do so immediately.

If the power goes out, do not use open flames, such as candles, or kerosene lamps as a source of light. Turn off major appliances to reduce power surges when electricity is restored.

- Do not make unnecessary telephone calls in order to leave lines open for emergency calls-
- Seek refuge in basements or interior hallways of the lowest floor possible. Stay away from glass windows, doors, shelves and heavy equipment. Close all interior doors. Secure and brace external doors.
- Do not use elevators because the power may fail.
- Do not go out in the "eye" of the storm, the winds will pick up suddenly from the opposite direction.
- Be alert for tornadoes.

## *After a Hurricane*

### I. Campus Safety

- Evaluate potential hazards and the need for emergency personnel-
- Dispatch police, fire, and rescue units as required and assist in rescue efforts.
- Provide security for closed buildings.
- Check buildings for injured and trapped people.
- Barricade damaged areas to keep people out.
- Provide traffic control to limit movement into affected areas.
  
- Notify the owners of damaged automobiles. Act as a resource on issues of safety, environmental, chemical, fire, radiological, and public health.
- Take pictures of damages and notify Human Resources concerning losses.
- Ensure that fire watches are posted if sprinklers or fire alarms are down. .Restore all sprinkler control valves to make sure they are open.
- Ensure that fire protection systems are completely restored.
- Assess chemical, radiological, biological, and asbestos releases and take appropriate actions. If required, notify appropriate agencies of environmental releases.

### 2. Facilities Services

- Survey damage. Look for broken or leaking gas lines, live wires, flooded electrical circuits, submerged electrical appliances, leaking gas or flammable liquids, pipe breakage, and structural damage.
- Repair electrical, plumbing, heating, ventilation systems, mechanical, and structural components or notify appropriate contractors to make repairs.
- Provide equipment, supplies, and staff to prevent further damage to campus facilities.
- Obtain the assistance of utility companies if needed.
- Stop gas, electric, and water services to affected buildings if appropriate.
- Provide debris removal.

- Constantly monitor boilers that remain on line.
- Follow safety regulations for PPE, lockout-tagout, and confined space entry.
- Connect electrical equipment used around water to a GFCI.
- Repair damage to automatic sprinkler systems and get sprinkler system back in service as soon as possible.
- Contact the Campus Safety Office to ensure that fire watches are posted.
- Begin salvage operations as soon as possible to prevent further damage.
- Assist in rescue efforts.
- Clean up flooded areas.
- Cover broken windows and torn roof coverings immediately. .
- Clean roof drains and remove debris from roofs to prevent drainage problems.
- Clean up or rope off dangerous areas where broken glass, unstable structures, or loose or hanging tree limbs are located.

### 3. Faculty, Staff & Students

- Report damage to buildings and grounds to Facilities Services.
- Use extreme caution when entering buildings. Check for gas leaks, electrical system damage, and sewer and water line damage-
- Stay out of damaged buildings. Return to your building only when authorities say it is safe.
- Stay away from downed power lines. Report downed power lines to Facilities Services. Do not handle live electrical equipment in wet areas. Electrical equipment should be checked and dried before being returned to service.
- Be sure the power is off before entering flooded basements if water is high enough to reach appliance motors or any electrical equipment.
- Help injured or trapped persons. Give first aid where appropriate. Report injuries to Campus Safety or call 911 for life threatening emergencies. Do not move seriously injured persons unless they are in immediate danger of further injury.
- Leave an area immediately if you smell gas or fumes from chemicals.
- Don't sightsee. Wait until an area is declared safe before entering-
- Do not spread rumors. They often do greater harm following disasters.
- Beware of animals driven to higher ground by flood waters.
- Only eat food and drink water you are absolutely sure is safe.
- Roads may be closed. Do not drive into flooded areas. Water two feet deep can float your car. Avoid weakened bridges and washed out roads.
- Stay on firm ground. Moving water only six inches deep can sweep you off your feet. Standing water may be electrically charged from underground or downed power lines.

## **TORNADOES**

### **Background**

A tornado is a violently rotating column of air in contact with the ground. Winds of 200-300 mph can occur with the most violent, tornadoes. Tornadoes are formed by severe

thunderstorms, most frequently in the spring and summer between 3:00 p.m. and 9:00 p.m., but can occur at any time. Movement is generally from southwest to northeast. The length of path averages 4 miles, but some have exceeded 100 miles. The width of path averages 300-400 yards but may reach up to one mile. The speed of travel averages 25-40 mph but they can be stationary or travel at speeds up to 70 mph. A heavy downpour usually precedes the tornado, frequently with hail and lightning. Clouds often have a greenish-black appearance. A loud roaring sound similar to a freight train is usually heard a few minutes before the tornado strikes. Visual identification may offer three to five minutes of time to seek shelter. Tornadoes do not always appear as dark funnels. Initially, condensation of water vapor around the vortex causes a pale cloud (usually in the shape of a funnel) to appear. The tornadoes' funnel will darken as it picks up more and more material from the ground. So much debris can surround the vortex that the tornado can lose its normal funnel like form and appear only as a dark cloud moving along the ground.

In an average year more than 600 tornadoes strike various parts of the United States. Scores of people are killed or injured, and hundreds of millions of dollars worth of property damaged occurs each year. About half of them occur in the period April through June. Several tornadoes are reported annually around New York State and July is the month of peak activity.

## **Definitions**

**Tornado Watch-** A tornado watch is issued when conditions are favorable for the formation of a tornado. The local National Weather Service will issue a watch bulletin to the local authorities, as well as the local media.

**Tornado Warning-** A tornado warning is issued when a tornado is actually sighted visually or by radar.

**Fujita Scale-** The Fujita Tornado Intensity Scale (or F-Scale) is used by meteorologists to measure tornado wind speeds. The F-Scale uses numbers from 0 through 5 and the ratings are based on the amount and type of wind damage. Between 1950 and 1994, 74% of all tornadoes that touched down in the U.S. were weak (F-0 or F-1), 25% were strong (F-2 or F-3), and only 1% were violent (F-4 or F-5).

**F-0** Gale tornado (40-72 mph): Some damage to chimneys, TV antennas, roof shingles; breaks branches off trees, uproots some trees, damages sign boards.

**F-1** Moderate tornado (73-112 mph): Peels surface off roofs, mobile homes and automobiles overturned, trees uprooted, attached garages destroyed.

**F-2** Significant tornado (113-157 mph): Considerable damage, roofs torn off frame houses, mobile homes demolished, large trees uprooted or snapped, light object missiles created, sheds and other outbuildings destroyed.

**F-3** Severe tornado (158-206 mph): Roof and some walls torn off well constructed houses, forests are flattened, and most block structures collapse.

**F-4** Devastating tornado (207-260 mph): Well constructed houses flattened cars thrown, large missiles created.

**F-5** Incredible tornado (261-318 mph): Strong frame houses lifted off foundations and carried considerable distances, automobile size missiles created, trees debarked, steel-reinforced concrete structures badly damaged, top stories demolished.

## **Procedures**

### ***Before a tornado***

#### **1. Campus Safety**

- Receive information from the National Weather Service in Albany and monitor radio weather broadcasts. The local voice of the National Weather Service NOAA weather radio can be found at (162.55 MHz).
- Provide weather information to Facilities Management.
- Notify the Vice President for Administration and the VP of Student Affairs if warranted.
- Evacuate buildings if necessary. During a tornado warning notify people in off campus buildings to be on the lookout. Evacuate to basement areas if necessary.
- Assist in warning the campus during a tornado warning.
- Initiate a call down procedure to notify buildings if a tornado is sighted.
  
- Call the Weather Service in Albany if a tornado is spotted.
- Inventory spill equipment and confined space equipment.
- Move chemicals from the Hazardous Materials storage sheds to an inside location. Ensure that the Campus Safety vehicles are stocked with appropriate supplies. Gas up all Campus Safety vehicles.
- Provide training to campus personnel concerning emergency response procedures. .
- Inspect buildings annually to ensure compliance with fire and safety regulations.

#### **2. Facilities Services**

- Contact employees who will conduct emergency operations.
  
- Inventory emergency equipment and supplies to ensure an adequate supply of pumps, generators, tarpaulins, emergency lights, and cleaning supplies.
- Ensure that portable pumps, sump pumps, and emergency generators are operable.
- Prepare for possible power outages and water shortages.
- Prepare for disruption of fire protection systems.
- Make arrangements with a septic tank service; pump service, or fire department to pump flooded basement areas if needed.
- Assist with an evacuation if necessary.

- Regularly inspect buildings for signs of deterioration that might increase the potential for damage during a tornado.
- Provide spotters when a tornado warning has been reported.
- .Prepare to store portable equipment, breakable items, etc., inside buildings during a tornado warning.

### 3. Faculty, Staff & Students

- Know the terms used to describe weather related emergencies.
- Listen to radio and television for emergency weather broadcasts.
- If ordered to evacuate, leave immediately-
- Know evacuation routes from your building. Have an established meeting place.
- Conduct periodic evacuation drills.
- Know the location of emergency exits, fire alarms, and fire extinguishers.
- Be on the lookout for the following danger signs: severe thunderstorms, hail, a roaring noise, and a funnel shaped cloud from the sky to the ground.
- Take shelter immediately when you hear a tornado warning or see a funnel cloud.
- Report funnel-shaped rotating clouds immediately to the Campus Safety Department.
- When a tornado watch has been announced be alert to other possible hazardous conditions such as lightning, rain, floods, high wind, and hail.
- Watch for an approaching cloud of debris that could be a tornado even if a funnel is not visible.
- Before a tornado hits, the wind may die down and the air may become very still. Tornadoes generally occur near the trailing edge of a thunderstorm. It is common to see clear, sunlit skies behind a tornado.

### *During a Tornado*

#### I. Faculty, Staff & Students -Indoor

- Seek shelter immediately in a basement if available.
- If you don't have a basement, move to the lowest floor possible. Seek refuge in interior hallways, doorways, a closet or bathroom near the center of the building or under heavy furniture.
- The more walls between you and the outside the better.
- In multi-level buildings move as far down as possible. Go to interior small rooms or halls.
- Stay away from exterior walls or glassy areas.
- Cover your head with your hands and arms and protect your body with a heavy blanket or rug if possible to provide protection from flying debris.
- Stay away from doors, windows, shelves, electrical equipment, and heavy equipment.
- Do not use elevators because the power may fail.
- Avoid places with wide-span roofs such as auditoriums, cafeterias, gymnasiums, and sports centers. The entire roof is supported solely by the outside walls. Get into a restroom, if possible. In larger buildings, restrooms are usually made of concrete block and will offer more protection.

- Do not open windows. Opening a window to allow inside and outside pressure to equalize is ineffective in reducing damage during a tornado. Most structures have sufficient venting to allow for the sudden drop in pressure.

## 2. Faculty, Staff & Students- Outdoor

- Find shelter immediately in the nearest substantial building.
- If a building is not close, take cover by lying flat in a ditch or depression.
- Stay away from utility poles, trees, and light structures-
- Move away from the tornadoes path at a right angle.
- Protect your body and head with anything available.
- Do not go into a grove of trees or under a vehicle.

## 3. Faculty, Staff & Students- Automobile

- The least desirable place to be during a tornado is in a motor vehicle. Cars, buses, and trucks are tossed easily by tornado winds. Never try to out drive a tornado. Tornadoes can change direction quickly.
- Get out of the vehicle immediately and take shelter in a nearby building.
- If there is no time to get indoors, seek the nearest ditch or ravine away from the vehicle. Lie flat and put your arms over your head.
- After the tornado has passed, watch for hazards created by the tornado, such as fallen objects, downed power lines, or broken roadways.

## *After a Tornado*

### I. Campus Safety

- Evaluate potential hazards and the need for emergency personnel-
- Dispatch police, fire, and rescue squads as needed.
- Closely monitor weather broadcasts for bulletins.
- Provide security for closed buildings.
- Check buildings for injured and trapped people.
- Barricade damaged areas to keep people out.
- Provide traffic control to limit movement into affected areas.
- Notify the owners of damaged automobiles.
- Act as a resource on issues of safety, environmental, chemical, fire, radiological, and public health
- Take pictures of damages and notify Human Resources concerning losses.
- Ensure that fire watches are posted if sprinklers or fire alarms are down.
- Restore all sprinkler control valves to make sure they are open.
- Ensure that fire protection systems are completely restored.
- Assess chemical, radiological, biological, and asbestos releases and take appropriate actions. If required, notify appropriate governmental agencies of environmental releases.

## 2. Facilities Services

- Survey damage. Look for broken or leaking gas lines, live wires, flooded electrical circuits, submerged electrical appliances, leaking gas or flammable liquids, pipe breakage, and structural damage.
- Repair electrical, plumbing, heating, ventilation systems, mechanical, and structural components or call in contractors to make repairs.
- Provide equipment, supplies, and staff to prevent further damage to campus facilities.
- Obtain the assistance of utility companies if needed.
- Stop gas, electric, and water services to affected buildings if appropriate.
- Remove debris
- Constantly monitor boilers that remain on line.
- Follow safety regulations for PPE, lockout tagout, and confined space entry.
- Connect electrical equipment used around water to a GFCI.
- Repair damage to automatic sprinkler systems and get sprinkler system back in service as soon as possible.
- Contact the Campus Safety Office to ensure that fire watches are posted.
- Begin salvage operations as soon as possible to prevent further damage. Assist in rescue efforts.
- Clean up flooded areas.
- Cover broken windows and roof coverings immediately.
- Clean roof drains and remove debris from roofs to prevent drainage problems.
- Clean up or rope off dangerous areas such as where broken glass, unstable structures, or loose or hanging tree limbs are located.

## 3. Faculty, Staff & Students

- Report damage to buildings and grounds to Facilities Management.
- Use extreme caution when entering buildings. Check for gas leaks, electrical system damage, and sewer and water line damage.
- Stay out of damaged buildings. Return to your building only when authorities say it is safe.
- Stay away from downed power lines. Do not handle live electrical equipment in wet areas. Electrical equipment should be checked and dried before being returned to service-
- Be sure the power is off before entering flooded basements if water is high enough to reach appliance motors or any electrical equipment.
- Help injured or trapped persons. Give first aid where appropriate. Report injuries to Campus Safety @ 6911 or call 911 for life threatening emergencies. Do not move seriously injured persons unless they are in immediate danger of further Injury.
- Leave an area immediately if you smell gas or fumes from chemicals. Don't sightsee. Wait until an area is declared safe before entering-
- Do not spread rumors. They often do greater harm following disasters.

# THUNDERSTORMS AND LIGHTNING

## Background

Thunderstorms are intense local storms averaging 20 miles across and reaching as high as 10 miles. The typical thunderstorm lasts approximately 30 minutes. Nearly 2,000 thunderstorms are in progress over the earth's surface at anyone time. Severe thunderstorms may have winds of more than 57 mph or hail 3/4 inch or more in diameter and may include dangerous lightning and heavy rain. Severe thunderstorms may also spawn tornadoes and flash flooding:

A thunderstorm is always accompanied by lighting. In the Unites States an average of 93 people are killed and 300 injures occur each year by lightning. Total property loss in the US caused by lightning is estimated in the hundreds of millions. Lightning can strike as far as 10 miles from the rain portion of the storm. Lighting can split trees, damage buildings, start fires, and electrocute people. Workers are especially vulnerable while working in the open or under trees, in boats or in office buildings on the phone. Working on metal equipment such as tractors, or using metal pipes can also make people targets for lightning. When struck, heart and breathing are often affected. Approximately 30% of people struck by lighting die. Relatively few people are killed indoors. The greatest number of indoor deaths is due to fires. A smaller proportion are due to people using the telephone or standing near or touching fixtures connected to house plumbing or electrical wiring.

## Definitions

**Severe thunderstorm watch**- indicates the possibility of thunderstorms with frequent lightning, damaging winds (58 mph or more), hail (3/4 inch, or greater), and heavy rain.

**Severe thunderstorm warning**- means that a severe thunderstorm has actually been sighted in the area or is indicated by radar .Warnings indicate imminent damage to life and property.

## Procedures

### *Before a Storm*

#### I. Campus Safety

- Receive information from the National Weather Service in Albany and monitor radio weather broadcasts. The local voice of the National Weather Service NOAA weather radio can be found at (162.55MHz).
- Provide information to Facilities Services.
- Notify the Vice President for Administration and the VP of Student Affairs, if warranted.
- Provide traffic control.
- Ensure an adequate supply of barricades and signs necessary for traffic control.

- Inventory spill equipment and confined space equipment.
- Monitor weather broadcasts.
- Ensure that the Campus Safety vehicles are stocked with appropriate supplies. Gas up all of the Campus Safety vehicles-
- Provide training to campus personnel concerning emergency response procedures. Inspect buildings annually to insure compliance with fire and safety regulations.

## 2. Facilities Services

- Inventory emergency equipment and supplies to ensure an adequate supply of pumps, generators, sandbags, tarpaulins, emergency lights, and cleaning supplies.
- Ensure that portable pumps, sump pumps, and emergency generators are operable.
- Prepare for possible power outages and water shortages.
- Prepare for disruption of fire protection systems.
- Make arrangements with aseptic tank service; pump service, or fire department to pump flooded basement areas if needed.
- Regularly inspect buildings for signs of deterioration that might increase the potential for damage during a thunderstorm.
- Secure outdoor objects that could blow away or cause damage or injury. Take light objects inside.
- Remove dead or rotting trees and branches-
- Inspect at least annually to ensure compliance with fire and safety regulations.

## 3. Faculty, Staff & Students

I

- Know the terms used to describe weather related emergencies.
- Listen to radio and television for emergency weather broadcasts.
- If ordered to evacuate, leave immediately.
- Know evacuation routes from your building.
- Have an established meeting place.
- Conduct periodic evacuation drills-
- Know the location of emergency exits, fire alarms, and fire extinguishers-
- Learn the thunderstorm danger signs: dark, towering, or threatening clouds, distant lightning and thunder and keep a watchful eye for an approaching storm. If you can hear thunder, you are close enough to the storm to be struck by lightning.
- If you are planning to be outdoors, check the latest weather forecast and keep an eye on the sky. At any signs of an impending storm, tune to your radio for the latest weather information. A NOAA Weather Radio is recommended if you participate in sports or other outdoor activities.
- To prepare yourself to deal with a victim who has been struck by lightning take a Red Cross First Aid/ CPR course.
- Before the storm arrives, disconnect external aerial and power leads to radio and television sets. Disconnect computer modems and power sources, and stay away from electrical appliances.
- Be alert for tornadoes.

## *During a Storm*

### I. Campus Safety

- Closely monitor weather broadcasts for bulletins and keep Facilities Management and upper management informed.
- Provide traffic control.
- Dispatch fire and rescue units as needed.

### 2. Facilities Services

- Shut off gas and electrical power if necessary.
- Monitor low lying areas for flooding potential and take appropriate action.
- Clean up flooding in buildings around campus.

### 3. Faculty, Staff & Students-inside

- Immediately move inside a building for greater protection. Close all windows and outside doors. Keep clear of windows and glass doors. Draw blinds and shades over windows. If windows break during the storm, this will prevent glass from striking you.
- Avoid showers, water faucets, and sinks because metal pipes can transmit electricity.
- Unplug appliances and stay away from electrical outlets.
- Don't touch any metal, brick, or concrete and don't stand bare foot on concrete or tiled floors.
- If advised to evacuate, do so immediately.
- If the power goes out do not use open flames, such as candles, or kerosene lamps as a source of light.
- Do not use the phone.

### 4. Faculty, Staff & Students -Outside

- If you cannot get to a building, seek shelter in a vehicle with a metal roof if possible. Close all windows and doors, and avoid touching any inside metal.
- If you are not near a vehicle, find a low spot away from trees, fences, and poles.
- If in the woods, take shelter under shorter trees or low brush.
- Do not stand underneath a tall isolated tree or telephone pole. Avoid projecting above the surrounding landscape.
- If boating or swimming, move to land immediately and find shelter or a low spot.
- If you feel your skin tingling or hair standing on end, lightning may be about to strike you. Squat low to the ground on the balls of your feet. Place your hands on your knees with your head between them. Make yourself the smallest possible target while minimizing contact with the ground. Do not lie flat on the ground.
- In a hailstorm take cover immediately. Do not drive. Pullover to the side of the road and wait for the hail to stop.

- Get away from any type of equipment (tractors, motorcycles, golf carts, etc.). Stay away from wire fences, metal clotheslines, metal pipes, rails, and fabric tents.
- If you are in a group, spread out and keep people several yards apart-
- If driving, slow down or park away from trees power lines etc.

## *After a Storm*

### I. Campus Safety

- Evaluate potential hazards and the need for emergency personnel-
- Call rescue squads and fire department and assist in rescue efforts. provide security for closed buildings.
- Check buildings for injured and trapped people.
- Barricade damaged areas to keep people out.
- Provide traffic control.
- Notify the owners of damaged automobiles.
- Act as a resource on issues of safety, environmental, chemical, fire, radiological and public health.
- Take pictures of damages and notify Human Resources concerning losses.
- Ensure that fire watches are posted if sprinklers or fire alarms are down.
- Restore all sprinkler control valves to make sure they are open.
- Ensure that fire protection systems are completely restored.
- Assess chemical, radiological, biological, and asbestos releases and take appropriate actions. If required, notify appropriate agencies of environmental releases.

### 2. Facilities Services

- Survey damage. Look for live wires, flooded electrical circuits, submerged electrical appliances, and structural damage.
- Repair electrical, plumbing, heating, ventilation systems, mechanical, and structural components or call contractors to make repairs.
- Provide equipment, supplies, and staff to prevent further damage to campus facilities.
- Obtain the assistance of utility companies if needed.
- Stop gas, electric, and water services to affected buildings if appropriate.
- Provide debris removal.
- Follow safety regulations for PPE, lockout tagout, and confined space entry. Connect electrical equipment used around water to a GFCI.
- Repair damage to automatic sprinkler systems and get sprinkler system back in service as soon as possible. Ensure that fire watches are posted.
- Begin salvage operations as soon as possible to prevent further damage.
- Assist in rescue efforts.
- Clean up flooded areas.
- Cover broken windows and torn roof coverings immediately.

- Clean roof drains and remove debris from roofs to prevent drainage problems.
- Clean up or rope off dangerous areas such as where broken glass, unstable structures, or loose or hanging tree limbs are located.

### 3. Faculty, Staff & Students

- Report damage to buildings and grounds to Facilities Management.
- Do not handle live electrical equipment in wet areas. Electrical equipment should be checked and dried before being returned to service.
- Stay away from downed power lines.
- Help injured or trapped persons. Give first aid where appropriate.
- Report injuries to Campus Safety @ 6911 or call 911 for life threatening emergencies. Do not move seriously injured persons unless they are in immediate danger of further Injury.
- Stay out of damaged buildings. Return to your building only when authorities say it is safe.
- Leave an area immediately if you smell gas or fumes from chemicals.
- Don't sightsee. Wait until an area is declared safe before entering-
- Do not spread rumors. They often do greater harm following disasters.

### **First Aid**

1. If you see someone who has been struck by lightning call 911 first to request emergency care. Persons struck by lightning receive a severe electrical shock but cannot shock other people. Often someone who was struck by lightning and appears to be dead can be revived by prompt action. If the victim is not breathing, but has a pulse, start rescue breathing. If both pulse and breathing are absent start CPR.

2. Victims who appear only stunned or otherwise unhurt may also need attention. Check for burns, especially at fingers and toes, and next to buckles and jewelry. Monitor breathing and pulse. Keep the victim from getting over heated or chilled. Reassure the victim.

3. If the victim is burned, provide first aid and call for an ambulance immediately. Look for burns where lightning enters and exited the body. Do not cool the burn with water. Put a dry sterile dressing over the wound.

# EARTHQUAKES

## Background

Earthquakes strike suddenly, violently and without warning. Major faults are located along the Pacific Coast and in the Midwest, as well as the Carolinas, Utah, and New England. Earthquakes can seriously damage buildings and their contents; disrupt gas, electric, and telephone services; and trigger flash floods and fires. More than 90% of earthquake related injuries result from objects inside the building falling on people and cuts caused by shattering windows, not from collapsing buildings. Fires or explosions can occur from flammable materials that are released from damaged storage containers. Flash floods can occur from damaged dams. Identifying potential hazards ahead of time and advance planning can reduce the dangers of serious injury or loss of life from an earthquake.

New York has had several earthquakes in the past few years that were felt. The third largest earthquake to occur is the 1897 magnitude 5.8 Giles County V A earthquake. This earthquake is the third largest in the eastern us in the last 200 years and was felt in 12 states.

## Procedures

### *Before an Earthquake*

#### I. Campus Safety

- Ensure an adequate supply of barricades and signs for traffic control.
- Be aware of the potential of a flash flood and take appropriate actions.
- Review the Evacuation Plan.
- Inventory spill equipment and confined space equipment.
- Ensure that all of the Campus safety vehicles are stocked with appropriate supplies.
- Provide training to campus personnel concerning emergency response procedures.
- Inspect buildings annually to ensure compliance with fire and safety regulations

#### .2. Facilities Services

- Inventory emergency equipment and supplies to ensure an adequate supply of pumps, generators, sandbags, tarpaulins, emergency lights, and cleaning supplies.
- Ensure that portable pumps, sump pumps, and emergency generators are operable. Prepare for possible power outages and water shortages.
- Prepare for disruption of fire protection systems.
- Make arrangements with a septic tank service; pump service, or fire department to pump flooded basement areas if needed.
- Regularly inspect buildings for signs of deterioration that might increase the potential for damage during an earthquake.
- Secure shelves, filing cabinets, tall furniture, desktop equipment, computers, printers, copiers, and light fixtures-
- Secure fixed equipment and heavy machinery to the floor.
- Know evacuation routes from your building. Have an established meeting place.

### 3. Faculty, Staff & Students

- Conduct periodic evacuation drills-
- Know the location of emergency exits, fire alarms, and fire extinguishers.
- Ensure that high shelving is securely fastened to walls.
- Place large or heavy objects on lower shelves.
- Store breakable items in closed cabinets.
- Hang heavy items such as pictures and mirrors away from where people sit.
- Store weed killers, pesticides, and flammable products securely in closed cabinets with latches and on bottom shelves.
- Place lips on chemical storage shelves or attach bungee cords across the front.
- Inspect your area for items that could fall, spill, break, or move during an earthquake and take steps to reduce these hazards.
- Do not store incompatible chemicals together.

#### *During an Earthquake*

##### I. Faculty, Staff & Students -Inside

- Take cover under a sturdy desk or table or stand against an interior doorway or wall.
- Protect your head with your arms and stay under cover until the shaking stops.
- Stay away from windows, bookcases, file cabinets, and other heavy objects.
- Do not use the elevator.
- Be aware that the fire alarm or sprinkler system may come on.
- Do not run for an exit. Most injuries occur from falling glass, fixtures, plaster, , bricks, debris, and electrical lines as people are leaving buildings.
- Do not attempt to restrain falling objects.

##### 2. Faculty, Staff & Students -Outside

- Stay outdoors. Do not attempt to run into a building.
- Move to a clear area away from trees, signs, buildings, downed electrical wires and poles.
- Do not run through streets or alongside buildings.
- Drop to your knees in a fetal position with head bending to touch the ground.
- Close eyes and cross arms over back of head and neck for protection. Stay in this position until the shaking stops.

##### 3. Faculty, Staff & Students -Driving

- Pullover to the side of the road, stop the car, and stay in the car until the shaking stops.
- Do not park under overpasses, power lines, trees or other hazards

## *After an Earthquake*

### 1. Campus Safety

- Evaluate potential hazards and the need for emergency personnel-
- Dispatch police, fire, and rescue units as needed.
- Provide security for closed buildings.
- Check buildings for injured and trapped people.
- Barricade damaged areas to keep people out.
- Provide traffic control to limit movement into affected areas.
- Notify the owners of damaged automobiles. Act as a resource on issues of safety, environmental, chemical, fire, radiological, and public health.
- Take pictures of damages and notify Human Resources concerning losses.
- Ensure that fire watches are posted if sprinklers or fire alarms are down.
- Restore all sprinkler control valves to make sure they are open.
- Ensure that fire protection systems are completely restored.
- Assess chemical, radiological, biological, and asbestos releases and take appropriate actions. If required, notify appropriate agencies of any environmental releases.

### 2. Facilities Services

- Survey damage. Look for broken or leaking gas lines, live wires, flooded electrical circuits, submerged electrical appliances, leaking gas or flammable liquids, pipe breakage, and structural damage.
- Repair electrical, plumbing, heating, ventilation systems, mechanical, and structural components or notify contractors to make repairs.
- Provide equipment, supplies, and staff to prevent further damage to campus facilities.
- Obtain the assistance of utility companies if needed.
- Stop gas, electric, and water services to affected buildings if appropriate.
- Provide debris removal.
- Constantly monitor boilers that remain on line.
- Follow safety regulations for PPE, lockout tagout, trenching, and confined space entry. Connect electrical equipment used around water to a GFCI.
- Repair damage to automatic sprinkler systems and get sprinkler system back in service as soon as possible. Ensure that fire watches are posted.
- Begin salvage operations as soon as possible to prevent further damage.
- Assist in rescue efforts.
- Pump out flooded basements.
- To prevent mold and mildew act quickly to remove water, clean and dry vital equipment and dehumidify damp areas.
- A building declared unsafe will be designated by a sign that states "Do not enter- This structure has been seriously damaged and is unsafe."
- Determine which buildings can be used for emergency shelter.

### 3. Faculty, Staff & Students

- Report damage to buildings and grounds to Facilities Management.
- Use extreme caution when entering buildings. Check for gas leaks, electrical system damage, and sewer and water line damage.
- Stay out of damaged buildings. Return to your building only when authorities say it is safe.
- Stay away from downed power lines. Do not handle live electrical equipment in wet areas. Electrical equipment should be checked and dried before being returned to service.
- Be sure power is off before entering a flooded basement if water is high enough to reach appliance, motors or any electrical equipment.
- Help injured or trapped persons. Give first aid where appropriate. Report injuries to Campus Safety @6911 or call 911 for life threatening emergencies. Do not move seriously injured persons unless they are in immediate danger of further Injury.
- Leave an area immediately if you smell gas or fumes from chemicals.
- .Don't sightsee. Wait until an area is declared safe before entering-
- .Do not spread rumors. They often do greater harm following disasters.
- Advise emergency personnel of any impending property damage, e.g., equipment close to falling on furniture, vital documents getting wet, etc.
- Open closet and cupboard doors cautiously.
- Do not use matches or cigarette lighters, or smoke after the earthquake because of the possibility of ruptured gas lines or other flammable materials being present.
- Be prepared for flooding caused from leaks in hot water heating systems.
- Be prepared for strong aftershocks.
- Move cautiously and observe your surroundings for hazardous conditions.

I

## WINTER STORMS

### Background

Severe winter storms can paralyze an entire region, bringing heavy snow, ice, strong winds, extreme cold temperatures, and freezing rain. Windblown objects, downed electrical wires, fallen trees and branches, and frostbite and hypothermia are possible. Ice and snowstorms can cause slippery roads and poor visibility making driving conditions hazardous. Winter storms can prevent employees and students from reaching the facility, leading to a temporary shutdown until roads are cleared. Heavy snow and ice can also cause structural damage and power outages. The weight of ice or heavy snow can down power lines and cause roofs to collapse.

About 70% of winter storm deaths occur in automobiles. The rest are primarily due to heart attacks from overexertion or hypothermia caused by overexposure to the cold. About half of all people killed by exposure to cold are more than 60 years of age. Over 75% of these victims are men. About 20% of the deaths occur in the home. Elderly and children under the age of one are most susceptible to cold.

## Definitions

**Blizzard Warning**- Issued when snow and strong winds combine to produce low visibility, deep snow drifts, and dangerously low wind chills. Severe winter weather with sustained winds of at least 35 mph is expected

**Flurries** - Light snow falling for short periods of time. No accumulation or light dusting is all that is expected.

**Freezing rain advisory** - Issued when freezing rain will produce hazardous but not life threatening conditions for motorists and pedestrians.

**Freezing rain** - Rain that falls onto a surface with a temperature below freezing. This causes it to freeze to surfaces, such as trees, cars, and roads, forming a coating or glaze of ice. Even small accumulations of ice can cause significant hazards.

**Heavy Snow** - 4- 6 inches or more expected in 12 hours.

**Sleet** - Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick to objects. However, it can accumulate like snow and cause a hazard to motorists.

**Snow Advisory** - Issued when 1-3 inches of snow are expected within 12 to 14 hours.

**Squalls** - Brief, intense snow showers accompanied by strong gusty winds. Accumulation may be significant

**Traveler's Advisory** - Severe winter conditions may make driving difficult or dangerous

**Wind Chill** - The wind chill is based on the rate of heat loss from exposed skin caused by combined effects of wind and cold. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature.

**Winter Storm Warning** - Severe winter weather is imminent or very likely within 12 hours

**Winter Storm Watch** - Severe winter weather is possible. Issued when at least 4 inches of snow in 12 hours, or at least 6 inches in 24 hours, or significant ice accumulations are possible within 24-48 hours.

**Winter Weather Advisory** - Cold, ice, and snow are expected to cause significant inconvenience and may be hazardous, but probably not life threatening.

## Procedures

### *Before a Winter Storm*

#### 1. Campus Safety

- Receive information from the National Weather Service in Albany and monitor radio weather broadcasts. The local voice of the National Weather Service NOAA weather radio can be found at (162.55 MHz).
- Provide inclement weather information to Facilities Management.
- Notify the Vice President of Administration and the Dean of Students, if warranted-
- Assist in warning the campus of an emergency situation.
- Notify members of the Emergency Operations Center if necessary.
- Provide traffic control. Ensure an adequate supply of barricades and signs-
  
- Review evacuations plans and assist with an evacuation if necessary.
- Act as a resource on issues of safety, environmental, chemical, fire, radiological, and public health.
- Take pictures of damages and notify the Human Resources concerning losses. .Ensure that fire watches are posted if sprinklers or fire alarms are down. .Restore all sprinkler control valves to make sure they are open.
- Ensure that fire protection systems are completely restored.
- Assess chemical, radiological, biological, and asbestos releases and take appropriate actions. If required, notify appropriate agencies of any environmental releases.
- Provide training to campus personnel concerning emergency response procedures

#### 2. Facilities Services

- Contact employees who will conduct emergency operations.
- Ensure that emergency generators and lights are operable.
- Prepare for possible power outages and water shortages.
- Prepare for disruption of fire protection systems.
- Assist with an evacuation if necessary.
- Regularly inspect buildings for signs of deterioration that might increase the potential for damage during a winter storm
- Protect equipment from freeze-ups.
- Ensure that drainage on roofs is adequate to handle melting snow.
- Have de-icing chemicals available to melt ice on walkways and sand to improve traction.
- Ensure that sufficient heating fuel is available and that boilers are functioning properly.
- Arrange for snow and ice removal from parking lots, walkways, loading docks, etc.
- Have accurate maps showing the location of all fire hydrants on campus in case snow covers the hydrants.
- Prevent drafts by repairing walls and roofs and making sure windows close tightly
- Evaluate roof construction for potential snow load collapse.
- Make provisions for manual removal of heavy snow accumulations on roofs.
- Have adequate winter clothing and blankets available for workers.

### 3. Faculty, Staff & Students

- Know the terms used to describe weather related emergencies.
- Listen to radio and television for emergency Weather broadcasts.
- If ordered to evacuate, leave immediately.
- Know evacuation routes from your building. Have an established meeting place.
- Conduct periodic evacuation drills
- Know the location of emergency exits, fire alarms and fire extinguishers.
- Fully check and winterize your vehicle. Keep your gas tank near full to avoid ice in the tank and fuel lines.
- Leave immediately when the university closes due to inclement weather.
- Carry a winter storm survival kit in your car which contains:
  - o A small can and water-proof matches to melt snow
  - o Blankets/sleeping bags
  - o Flashlight with extra batteries
  - o Knife
  - o High calorie, non-perishable food
  - o Sand or cat litter
  - o Shovel
  - o Windshield scraper
  - o Tool kit
  - o Tow rope
  - o Jumper cables
  - o Water container
  - o Compass & road maps
  - o Cell phone

### *During a Winter Storm*

#### I. Campus Safety

- Closely monitor weather broadcasts for bulletins.
- Call fire, and rescue squads and assist in rescue efforts.

#### 2. Facilities Services

- Shut off gas and electrical power if necessary.
- Assist in rescue efforts.
- Remove snow from parking lots and sidewalks

#### 3. Faculty, Staff & Students

- Monitor radio and television broadcasts for progress reports.
- If advised to evacuate, do so immediately.
- If the power goes out do not use open flames, such as candles, or kerosene lamps as a source of lights.

- Do not make unnecessary telephone calls in order to leave lines open for emergency calls.
- Avoid unnecessary travel and be alert to changing weather conditions.
- Stay indoors during a storm.
- Walk carefully on snowy and icy walkways.
- Wear loose fitting lightweight warm clothing in several layers rather than one layer of heavy clothing. The outer garments should be tightly woven and water repellent. Because half of your body heat loss can be from the head wear a hat or scarf. Use mittens instead of gloves.
- Cover your mouth with a scarf to protect your lungs from extreme cold air. .Avoid spending long periods of time outdoors in the cold, and avoid strenuous exercise or hard labor outdoors in cold weather. The strain from the cold and hard labor may cause a heart attack. Also, try and keep dry when outdoors in cold weather.
- Be aware of wind chill, the combined cooling effect of wind and low temperatures, makes cold weather seem colder.
- If caught in a winter storm outside find shelter. Try to stay dry, cover all exposed parts of the body. Watch for signs of frostbite and hypothermia.
- Be careful when shoveling snow. Take frequent breaks. Use snow blowers when possible.

#### 4. Faculty, Staff & Students -Trapped in a car

- Pull off the highway, set hazard lights to flashing and hang a distress flag from the radio antenna or window. Turn on the dome light at night when running the engine. Raise the hood after the snow stops falling.
- Remain in your vehicle where rescuers are most likely to find you. Do not try to walk to safety unless you can see a building close by. Disorientation occurs quickly in wind-driven snow and cold.
- Run the engine and heater about ten minutes each hour to keep warm. When the engine is running, open the window slightly for ventilation. This will protect you from carbon monoxide poisoning. Keep the exhaust clear so fumes won't back up into the car. ~
- Exercise to maintain body heat, but avoid overexertion. In extreme cold use road maps, seat covers, and floor mats for insulation. Huddle with passengers and use your coat for a blanket.
- Take turns sleeping. One person should be awake at all times to look out for rescue crews.
- Be careful not to use up battery power. Balance electrical needs- the use of lights, heat and radio -with supply.
- If stranded in a remote area, spread a large cloth over the snow to attract attention of rescue personnel who may be surveying the area by airplane.

## *After a Winter Storm*

### I. Campus Safety

- Evaluate potential hazards and the need for emergency personnel.
- Dispatch fire and rescue units as needed.
- Provide security for closed buildings.
- Check buildings for injured and trapped people.
- Barricade damaged areas to keep people out.
- Assist in rescue efforts.
- Notify the owners of damaged automobiles.
- Take pictures of damages and notify Human Resources concerning losses.
- Ensure that fire watches are posted if sprinklers or fire alarms are down.
- Restore all sprinkler control valves to make sure they are open.
- Ensure that fire protection systems are completely restored.

### 2. Facilities Services

- Survey damage. Look for downed wires, pipe breakage, and structural damage. Repair electrical, plumbing, heating, ventilation systems, mechanical, and structural components or call contractors to make repairs.
- Provide equipment, supplies, and staff to prevent further damage to campus facilities.
- Obtain the assistance of utility companies if needed.
- Stop gas, electric, and water services to affected buildings if appropriate.
- Follow safety regulations for PPE, lockout tagout, confined space entry, and trenching. Connect electrical equipment used around snow and ice to a GFCI.
- Repair damage to automatic sprinkler systems and get sprinkler system back in service as soon as possible.
- Contact the Campus Safety Office to ensure that fire watches are posted if necessary.
- Begin salvage operations as soon as possible to prevent further damage.
- Assist in rescue efforts.

### 3. Faculty, Staff & Students

- Report damage to buildings and grounds to Facilities Management.
- Use extreme caution when entering damaged buildings. Check for downed wires and water line damage.
- Help injured or trapped persons. Give first aid where appropriate. Report injuries to Campus Safety @ 6911 or call 911 for life threatening emergencies. Do not move seriously injured persons unless they are in immediate danger of further Injury.
- Leave an area immediately if you smell gas or fumes from chemicals
- Don't sightsee. Wait until an area is declared safe before entering-
- Do not spread rumors. They often do greater harm following disaster.
- Continue to monitor weather broadcasts.

## First aid

***Frostbite:*** Frostbite is damage to the body tissue when the tissue becomes frozen. Frostbite causes a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, nose, and ear lobes. If these symptoms are detected get medical help. If you must wait for help, slowly re-warm affected areas in lukewarm water. Do not rub affected areas or break blisters.

***Hypothermia:*** Hypothermia is a serious health problem resulting from low body temperature. Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and exhaustion. When a person suffers from hypothermia, the extremities are cold (blue). To detect hypothermia, take the persons temperature. If the body temperature is below 95 degrees seek medical care. If medical care is not available, begin warming the person slowly. Warm the body core first. Do not warm the extremities. This drives the cold blood towards the heart and can lead to heart failure. Get the person into dry clothing and wrap them up in a warm blanket covering the head and neck. Never give a hypothermia victim a drink with caffeine in it or alcohol. Caffeine is a stimulant, and can cause the heart to beat faster and hasten the effects the cold has on the body. Alcohol is a depressant and can slow the heart and hasten the ill effects of cold body temperatures.

## HEAT EMERGENCIES

### Background

Heat probably contributes to more illness and death than any other weather related cause. More than 1,000 people died during the July 1995 heat wave. This exceeded the average, number of lives lost each year in the United States to floods, hurricanes, and tornadoes. In a normal year about 175 deaths in this country are due to excessive heat. Most of these deaths could have been avoided

Heat kills by taxing the body beyond its capabilities. Doing too much on a hot day, spending too much time in the sun or staying too long in an overheated place can cause heat related illnesses. Workers may be especially susceptible to heat related illness or death if they don't have proper ventilation or cooling, especially if they work in confined spaces. Heat can affect anyone. However, it is more likely to affect young children, elderly people, and people with chronic health problems. In addition, people who are not conditioned to hot weather, people that overexert themselves in hot weather, obese people, and people who use alcohol or drugs are also at risk.

### Definitions

**Heat Advisory-** High and potentially dangerous values of heat index are occurring, imminent, or highly likely. Prolonged exposure to heat and/or strenuous activity may result in heat related illnesses.

**Heat Index-** A measure of how hot it feels when relative humidity (RH) is added to the

shade, with a five mph wind. Being in full sun or an area with no air movement can increase the heat index by 15 F

80-90 F: Fatigue possible with prolonged exposure and/or physical activity .90-105 F: Heat stroke, heat cramps, and heat exhaustion possible with prolonged exposure and or physical activity

130 F or higher: Heat stroke highly likely with continued exposure

105-130 F:

Heat stroke, heat exhaustion, or heat cramps likely with prolonged exposure and/or physical activity

Heat Warning- Life threatening heat is occurring, imminent or highly. Take precautions.

Heat Watch- Excessive heat is possible in the next day or two.

Heat Wave- Prolonged period of excessive heat and humidity.

## **Procedures**

### ***Before a Heat Wave***

#### **1. Campus Safety.**

- Receive information from the National Weather Service in Albany and monitor radio weather broadcasts. The local voice of the National Weather Service NOAA.-weather radio can be found at (162.55 MHz).
- Provide information to Facilities Services.
- Notify the Vice President of Administration and the VP of Student Affairs if warranted.
- Assist in warning the campus of an emergency situation.
- Conduct training sessions concerning heat emergencies.

#### **2. Facilities Services**

- Ensure that workers are properly trained about heat emergencies.
- Prepare for possible power outages.

#### **3. Faculty, Staff & Students**

- Know the terms used to describe weather related emergencies.
- Listen to radio and television for emergency weather broadcasts.
- Have a place to cool off. Have fans available if you don't have an air conditioner.
- Know the symptoms of heat disorders and overexposure to the sun, and be ready to give first aid and treatment.
- When the heat index rises above 90 F, plan to take appropriate precautions
- Have plenty of non-alcoholic drinks or water available.

## ***During a Heat Wave***

### 1. Campus Safety

- Closely monitor weather broadcasts for bulletins.
- Call the rescue squad if necessary.

### 2. Faculty, Staff & Students

- Monitor radio and television broadcasts for progress reports.
- If the power goes out because of excessive use, do not use open flames, such as candles, or kerosene lamps as a source of light.
- Dress for summer. Wear lightweight, light colored clothing to reflect heat and sunlight.
- Increase your intake of fluids such as water and juice. Drink fluids every 30 minutes even if you don't feel thirsty. Avoid alcoholic and caffeine beverages.
- Eat small meals more often. Avoid foods that are high in protein, which increases metabolic heat.
- Slow down- strenuous activities should be reduced, eliminated, or rescheduled to the coolest time of the day. Individuals at risk should stay in the coolest available place. .
- Avoid the outdoors during extreme heat. If you must go out in the sun, use sunscreen and wear a wide brimmed hat.
- Stay in an air-conditioned environment if possible. Just two hours a day in air conditioning can significantly reduce the risk of heat related illness. If air conditioning is not available, cool baths or showers, or fans can help keep the body temperature down. Fans however, are not protective at temperatures greater than 90 F with humidity greater than 35%.
- Allow your body to get acclimated to hot temperatures for the first 2-3 days of a heat wave.
- Do not take salt tablets unless prescribed by a physician-
- Do not leave children or pets in a closed vehicle, even for a few minutes. Temperatures inside a closed vehicle can reach 140 F to 190 F within 30 minutes on a hot day.

## ***After a Heat Wave***

### 1. Faculty, Staff & Students

- Help injured persons. Give first aid where appropriate. Report injuries to Campus Safety @ 6911 or call 911 for life threatening emergencies. Do not move seriously injured persons unless they are in immediate danger of further injury.

## **First Aid**

***Heat Cramps-*** Heat cramps are muscular pains and spasms due to heavy exertion. They usually involve the abdominal muscles or the legs. The loss of water from heavy sweating probably causes the cramps. To treat heat cramps get the person to a cooler place and have him or her rest in a comfortable position. Lightly stretch the effected muscle and replenish fluids. Give a half glass of water every 15 minutes. Do not give liquids with alcohol or caffeine in them.

***Heat Exhaustion:*** Heat exhaustion is less dangerous than heat stroke. It typically occurs when people exercise heavily or work in a warm, humid place where body fluids are lost through heavy sweating. Fluid loss causes blood flow to decrease in the vital organs, resulting in a form of shock. With heat exhaustion, sweat does not evaporate, as it should, possibly because of high humidity or too many layers of clothing. As a result the body is not cooled properly. Signals include cool, moist, pale, or flushed skin. Heavy sweating, headache, nausea, vomiting, dizziness, and exhaustion may occur. Body temperature may be close to normal. Move the victim to a cooler place and loosen or remove tight clothing. Apply cool, wet cloths to the skin and offer a half glass of water every 15 minutes. Do not give salt to the victim.

***Heat Stroke:*** Also known as sunstroke, heat stroke is life threatening. The victim's temperature - control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly. The skin becomes hot and red. If the victim is sweating from physical exertion, the skin may be wet; otherwise it will feel dry. Changes in consciousness, rapid weak pulse, and rapid shallow breathing may occur. Body temperature can rise as high as 105 F. Call for an ambulance immediately. Move the person to a cool place. Work quickly to cool the body by placing the victim in a cool bath or wrapping wet sheets around the body and then fanning it. Place ice packs or cold packs on each of the victim's wrists and ankles, in the armpits and on the neck to cool the large blood vessels. Do not use rubbing alcohol because it closes the skin's pores and prevents heat loss. Keep the victim lying down and offer water. If there are changes in the victim's consciousness or if the victim vomits, do not give anything to eat or drink.

***Sunburn:*** Sunburn is characterized by redness and pain. In severe cases, swelling of skin, blisters, fever, and headaches may occur. Use ointments for mild cases if blisters appear and do not break. If breaking occurs, apply dry sterile dressing. A physician should see serious extensive cases.

## **EMERGENCY EQUIPMENT & SUPPLIES**

1. The following equipment is available to handle natural disasters:

- Brooms, squeegees and absorbents to remove water
- Straps, rope, wire to brace/anchor yard storage, signs, cranes, and roof mounted equipment
- Masking tape, plastic sheeting, and large garbage bags (for emergency rain protection)
- Dump trucks, tractors, backhoes, bucket truck, buses, truck with lift, forklift .Portable, battery operated radio and extra batteries
- Tree light, free standing connect to generators
- Portable radios
- Portable gasoline containers
- Emergency generators
- Spare tires
- Chain saws, shovels
- Plastic sheeting
- Plywood, lumber.
- Flashlights and extra batteries
- First aid kits
- Sand bags
- Pumps, large and small
- Sand
- Waterproof boots, rain gear
- Sewer plugs, flushing machine
- Assorted hand tools
- Barricades
- Chemical spill equipment
- Confined space meter, tripod, blowers
- Ladders

2. Additional equipment is available from local retail stores, and the Schenectady City Fire Dept.