



Take the Prepare in a Year - Texas Challenge

A 52-week public education campaign for preparedness

ARE YOU READY?

Do you know what is needed to protect you and your family from flooding, a tornado or other severe weather? Every community in Central Texas is subject to disaster. When disaster strikes, will you and your family be ready?

The concept of Prepare in a Year is to help families walk through the preparedness cycle over 52 weeks. More importantly, the concept of Prepare in a Year is to help each member of the family to learn and gain a natural perception of emergency preparedness. When this happens, preparedness becomes second nature and when disasters occur everyone knows how to respond.

Disasters can and will happen no matter what we do. The idea of disaster preparedness does not reduce the likelihood or risk of a disaster occurring; however, it can reduce the impact it has on our lives and more importantly the impact on our families. Preparedness can also help speed the recovery process and a return to some sense of normalcy.

The Blanco River Regional Recovery Team (BR3T) asks each person to consider taking the Prepare in a Year Texas Challenge. We ask that you pledge to contribute a few minutes each week to think about preparing yourself and your family for disaster. We ask that you follow the activities, take the appropriate actions for each task and discuss as a family what is being done. Over the course of a year, participants will empower themselves and their families to face any disaster.

Why Prepare

Although disasters can and often do occur at any time, less than 44% of the population even have a basic first aid kit, let alone have assembled emergency or disaster supplies. Even of the people who do have kits, many could not tell you where that kit is six months or a year later. What to do and how to prepare is too often only thought about during or following a disaster. As the memories of that event fade, so does the enthusiasm for preparedness. This is a problem that inspired the creation of this Prepare in A Year program. By following this program over a span of time, working through each area or theme and hopefully taking additional steps, preparedness will begin to become second nature.

There are many reasons to prepare for disaster, but none more powerful than the desire to take care of family and loved ones. Too often many people do not pay attention until a disaster hits and even when they do pay attention they don't think it's going to happen to them. They think that even if disaster were to occur, government and responders will ride in on a white horse to bail them out. Possibly this is a side effect of how media helps create the perception that when a disaster occurs, responders are going to immediately be available to help. Even if that were possible, does anyone really think that a first responders primary job is to help you and not work for the greater good of the communities they serve?

The reality of today's world is every person has a responsibility to take steps appropriate for their family and community. People should know what types of disasters could occur in their area, what impacts those disasters could have and take appropriate steps to prepare themselves and their families. Everyone above the age of 12 should have an individual emergency kit that can sustain them at even minimum levels for a period of at least 72 hours. Parents of children under 12 should have kits not only for themselves, but for those children. Each kit should contain food, water and other necessities to sustain that person through times of disaster.

There are also other great reasons to be prepared for and thinking about disaster as well. By being prepared, your family can help reduce fear, anxiety, and losses that accompany disasters. Families should be ready to evacuate their homes if needed and take refuge in public shelters or build shelter for themselves. Families should know how disasters disrupt community lifelines and know how to care for their basic medical, emotional and physical needs.

Identify Your Risk

In the BR3T Service area there are multiple types of disasters that could occur. Some events like flooding or wildfire may require households to evacuate, where a tornado or hazardous material event may require sheltering in place. Knowing the types of disasters your family might face is the first step in knowing how to be prepared.

Most areas of Central Texas share common natural and human caused threats. Although this list is by no means definitive, if a person or family is prepared for these events, they should fare well in other events.

1. Flooding, riverine, shallow and urban
2. Extreme and Severe Weather, Thunderstorms, Hail, Tornadoes,
3. Extreme Temperatures, both Heat and Cold
4. Brush / Wildfire
5. Drought
6. Pandemic
7. Hazardous Material Spill
8. Terrorism

Your household may or may not be subject to any or all of these potential threats. However, recognizing what could happen and taking logical steps to reduce the impact of any disaster. In the appendix of this booklet, further information on each of these risk is provided so individuals and families can decide what information they want to include in their personal plan.



The Twelve Themes of Prepare in a Year - Texas

1. Create a Family Disaster Action Plan
 - a. Understanding Disasters
 - b. Communications plan including Out of Area Contacts
 - c. Establish family evacuation Plan
 - d. Putting together a Family Disaster Action Plan.
2. Build a Disaster Go Bag
 - a. Home (Food and Water, important documents, under the bed items)
 - b. Identify and plan for safeguarding of important documents
 - c. Storage and Care of Kits
 - d. Specialized (Pets, Medical, Search and Rescue)
3. Prepare Your Family
 - a. Children
 - b. Elderly
 - c. Special Needs
 - d. Pets
4. Disaster First Aid
 - a. Disaster First Aid -vs- American Red Cross
 - b. Care for Injured
 - c. Care for Self
 - d. Further Training
5. Evacuation and Sheltering in Place
 - a. Reasons to evacuate
 - b. Reasons to Shelter in Place
 - c. What to take with you?
 - d. Returning Home
6. Eliminate Hazards in your Home and Workplace
 - a. Personal Safety
 - b. Flood Safety
 - c. Fire Safety
 - d. Utility Safety
7. Understanding Man Made Risk
 - a. Hazardous Materials
 - b. Technological
 - c. Terrorism
 - d. Other
8. Training
 - a. Online
 - b. AMR/ Salvation Army
 - c. CERT / MYN
 - d. Advanced
 - i. EMI
 - ii. CDP
 - iii. TEEX
 - iv. RDPC
9. The Disaster Cycle
 - a. Understanding how the process works
 - b. How individuals can be a part
 - c. Building Capacity
 - d. Carrying it Forward
10. Volunteer
 - a. Local
 - b. Voluntary Organizations
 - c. Disaster Assistance Workers
 - d. Long Term Recovery
11. Exercising the Plan
 - a. Family Discussion
 - b. Drills
 - c. Functional Exercise
 - d. Neighborhood exercises
12. Revising the Plan
 - a. Lessons Learned
 - b. Our Changing World
 - c. Making Updates
 - d. Carrying it Forward

Theme One: Creating a Family Disaster Action Plan

Week 1a – Understanding Disasters

Every year individuals, families and communities are impacted by disaster events. These events can have short term impact such as a heat wave or it can have long term impact such as was seen with Hurricane Katrina. When disaster events occur, government, disaster relief organizations and responders will try to assist your family; however, they may also need to focus their efforts in other areas of the community first. Individuals and families need to take steps to be prepared themselves. Individuals and families who take appropriate steps to become prepared are empowered, have reduced fear and anxiety over a disaster and often have fewer losses.

Being prepared is not just building a go kit. It is also having a plan for what to do in case of a fire, where to seek shelter during a tornado, or when and where they should evacuate to if necessary. It is also knowing what steps can be taken to reduce the impact that a disaster event might have on your family.

When disasters strike, having a plan in place will definitely help improve a person or family's odds of survival. The process of writing a Family Disaster Action Plan will help in understanding the risk appropriate to your household, what should be done in case of disaster and additional steps that can be taken to reduce risk even more.

The first step in developing an emergency or disaster plan is recognizing the types of hazards that could impact your family. Most of Central Texas share common natural and human caused threats. Although this list is by no means definitive, if a person or family is prepared for these events, they should fare well in other events.

1. Flooding, riverine, shallow and urban
2. Extreme and Severe Weather, Thunderstorms, Hail, Tornados,
3. Extreme Temperatures, both Heat and Cold
4. Brush / Wildfire
5. Drought
6. Pandemic
7. Hazardous Material Spill
8. Terrorism

Your household may or may not be subject to any or all of these potential threats. However, recognizing what could happen and taking logical steps to reduce the impact of any disaster. Now we will walk through each of these events so individuals and families can decide what information they want to include in their personal plan.

Once you identify what hazards your family is subject to, a risk assessment should be performed based on which hazards create the highest impact. Hazards should be ranked with those events that would have the greatest impact to those events with the lowest impact. A second list should then be created with hazards ranked as most likely to happen to least likely to happen.

Both of these list should then be placed on a matrix with Quadrant #1 being High Risk / High Likelihood, Quadrant #2 being High Risk / Low Likelihood, Quadrant #3 being Low Risk / High Likelihood and Quadrant # 4 being Low Risk / Low Likelihood. This matrix then allows the family to identify, rank and prepare for the most critical needs first. An example of this matrix is show in table 1.1

Table 1.1
Hazard / Risk Assessment

| | |
|--|---|
| Quadrant #1 High Risk / High Likelihood | Quadrant #2 High Risk / Low Likelihood |
| Quadrant #3 Low Risk / High Likelihood | Quadrant #4 Low Risk / Low Likelihood |

In your family emergency plan, the first priority should be to prepare for Quadrant #1 events first then #2, #3 and #4. This allows you to prioritize your efforts where they can have the greatest impact on your safety. In ALL EVENTS, individuals and families should always follow the direction, advice and warnings of public officials, emergency management officials and responders.

Week 1b - Communications Plan including Out of Area Contacts

In the event of disaster, the stress and confusion will often make it difficult to think straight or make sound decisions. However, when you prepare in advance, you can make those sound decisions without the stress. This is the concept of developing a Family Disaster Action Plan. Think about what you and your family might need. Think about where you might go if your home is damaged or inaccessible. How would family members communicate if they are separated. These are some of the issues we will look at this week in our Prepare in a Year Texas series.

One of the most important parts of a Family Disaster Action Plan is communication and reunification. Disasters seldom occur at convenient times; it is possible that members of the family could be at work, at school, at the store or even out of town. Having a plan of how the family will communicate following a disaster and where the family can go if separated, needs to be an intricate part of the planning process.

As part of the communications plan, it is recommended that every family establish an out of area contact whose job will be the relaying of information between family members. In many disasters, local phone lines are either overloaded or out of service entirely. However, even when local lines are unusable, long distance lines may still work. If every member of the family knows that in the case of disaster, everyone is to call Aunt Clare in Tennessee, then she can relay information between family members. Every member of the family should have this number written down and with them with the instructions that they are to check in with her as soon as is possible. A wallet-size form you can use to write down this information can be found at www.ready.gov.

Text may also serve as a viable way of communication between family members. As text are sent via a different wave band, even when phone lines are overtaxed, text may still easily transmit. To avoid tying up phone lines that may be needed by emergency responders like 911, unless a person is in immediate danger they should try to refrain from talking on the phone.

Outside the Area Contact:

Local phone calls and long distance calls work on different circuits. When local circuits are overloaded, you may still be able to make long distance calls. Choose someone outside of the local calling area to be your “outside the area” contact. Make sure all family members carry this phone number with them. If something happens when your family is not together and you are not able to reach each other, each family member can call the “outside the area” contact and leave a message for the others.

In Case of Emergency (ICE) numbers:

If you are hurt and can't talk, first responders and hospital staff may not know how to contact your family right away. If you have a cell phone, you can provide the phone numbers for your emergency contacts to first responders and hospital staff.

1. Create a new contact in your cell phone's phone book.
2. Name the contact ICE.
3. Enter all phone numbers for the person you would like to have notified in a medical emergency.

Emergency Contacts:

It is important to have important numbers written down as well as programmed into cellphones. In case a cellphone is broken or lost, having these numbers available will at minimum relieve a lot of stress. These emergency numbers should also include out of area contact numbers for family member to check in with in case local lines are overwhelmed.

Week 1c - Establish Family Evacuation Plan

There are many reasons why a family may need to evacuate from their home. If you had to evacuate tomorrow would you be ready to go? Do all family members understand where to go? How to get back in touch with each other? What to take with them? These are all questions that should be addressed in a Family Disaster Action Plan. Disasters requiring the need to evacuate are stressful enough, doesn't it make sense to take the time to do some planning if the result is at least some reduction in that stress?

No two disasters will ever be the same. Even though we plan, every contingency cannot be covered. However, if a plan is written to address concepts instead of specific events, it will usually cover what is needed, while remaining flexible enough to adapt to the situation. No matter what type of event, understanding some basic concepts will help each member of the family to plan for, prepare for and evacuate more safely, with reduced stress and with fewer questions as to what will happen next.

The First Concept is knowing what type of events may require evacuation and what the differences are with each type of event. For events like flooding and fire, the impacts and how you need to respond may be obvious. A person will naturally think of heading uphill to escape flood waters and try to get upwind of a fire to escape the smoke. But if going uphill or upwind only causes you to be trapped in a more precarious location it is not going to be the best option. Maintaining awareness of your surroundings and using solid judgement should guide your actions. Recognizing the situation, you are dealing with and where you ultimately need to evacuate to should be part of that awareness. What needs to be answered in this process are what obstacles might impact my escape route (low water crossings, bad roads or washouts, wildfire risk etc.) Additionally, if the event is something like a Hazardous Material event, can I safely get upwind, upstream and uphill of the event? How will I monitor evacuation orders and updated information or direction? This is the first concept that needs to be considered in developing an evacuation plan.

The Second Concept is knowing what needs to be taken with you when you evacuate. What important papers and supplies might be needed? What supplies and information will be

available at the shelter or other evacuation location? How will I gather and carry those items needed? What if certain members are not home at the time of evacuation, how will their supplies be gathered?

The Third Concept is consideration of what special needs and precautions might need to be addressed. Some families have special needs and considerations that might impact the requirements for sheltering or possibly the ability to evacuate by themselves. Communities are required to have shelter options for pets, but what are those options and what requirements might need to be met to access and use them? What about family members who have medical, emotional or physical impairment that might require special care?

The Final Concept is what to do with pets, livestock. As previously mentioned, as a result of change in Federal Laws, communities must plan for and include options for sheltering of pets in case of evacuation. This does not mean that all pets can be taken directly into all shelter locations; however, it does mean that reasonable, humane and safe shelter will be provided. Often this sheltering will be in conjunction with local humane societies and other organizations specifically equipped to provide these services. Recognizing what options are available and what requirements (cages, food, etc.) are needed to be brought with the animal. Also not all pets may be included in all pet friendly shelters. It is advisable to check into these requirements / options prior to the onset of disaster.

For more information, go to <https://www.ready.gov/evacuating-yourself-and-your-family>

Families should also decide upon two places to meet in case the home is not safe or accessible. One location should be relatively close and the other outside of your neighborhood. This spot may be at the local library, a house of worship or even a big tree up on the hill. The idea is a mutually agreed upon location where everyone knows they should try to get to. Proper care must be taken in choosing locations to make sure each family member does not put themselves in additional danger in order to get there or the location itself may not be safe. Make sure all family members have the address and if appropriate, the phone number of the meeting place. This information should also be provided to the out of area contact.

Finally make sure each family member has a copy of the Family Disaster Action Plan. Post the action plan by a phone in your home, and include it in your go bag as well.

An easy to use template can be found at www.br3t.org

For additional information go to <https://www.ready.gov/make-a-plan>

Week 1d - Putting together a formal plan

Over this past month, we have discussed different aspects of family disaster planning. As has been mentioned, disasters will often strike with little or no warning and it is possible that the family may not be located in the same place when it happens. That is why it is important to plan for, share with all family members and practice Family Disaster Action Plans.

In week one of this Prepare in a Year Texas program, discussion about the types of disasters your family might be impacted by. In week two, questions were asked about what steps might reduce some of that risk. In week three we looked at the need for a communications plan and last week we looked at evacuation. This week, we will take all of those issues and assemble them into a formal Family Disaster Action Plan.

Hopefully, time has been taken to follow through with the recommended activities provided each week. These activities all help families develop or gather important information needed in the plan. Recognizing what events your family might be vulnerable too, taking appropriate steps to reduce risk and developing both communications and evacuation plans are all important steps. But unless they are developed into a plan, they will never achieve their full value. The concept of preparedness is to take appropriate steps to reduce your overall vulnerability and increase your ability to survive disaster.

See Annex A for a Family Disaster Action Plan Template or go to www.br3t.org.

Theme Two: Build a Disaster Go Kit

In addition to having a Family Disaster Action Plan, it is also important to have certain supplies available for use during disasters. It is important to have essential supplies stored in safe, accessible locations that will sustain you and your family for a minimum of 72 hours, but preferably two weeks.

Week 2a – Home (Food and Water, important documents, under the bed items)

It is important to have certain basic supplies available in case of disaster or other emergencies. These events may result in power and other utility outages, limited access into or out of a home or area and may require your family to be self-sustainable for a few days to a few weeks. These basic supplies include non-perishable food, water, medication(s), personal items as well as lighting and communication. Special items for babies, senior citizens and pets should be included as well.

It is important to have certain documents and files available for quick access in case of emergency. Such items may include birth certificates, property deeds, insurance policies, and financial records. These records (or copies) should be kept in a watertight bag or container that can be quickly accessed in case of emergency evacuation.

A minimum of 3 days of nonperishable food should be stored for each person, plus a minimum of 1 gallon of water per person, per day. During the summer when additional heat may increase need for hydration this supply should be increased to a minimum of 2 gallons, per person, per day. Items such as protein bars, nuts, crackers, canned goods and camping food all can be used for food during emergency events. Additionally, items such as a can opener, cooking utensils and a camp stove or a BBQ grill should be considered important. In cases of chemical emergencies where you may be required to shelter in place for a period of time, additional items like duct tape and plastic to seal windows and doorways may be advisable.

Items needed for disaster first aid include items like Gauze, Sterile Gloves, Soap and Alcohol, first aid creams and bandages should be stored in a separate container that can be

accessed if needed. Premade first aid kits can work well for this; however, make sure that adequate supplies are provided for each member of the family. Additionally, for family members who may need certain medicines, at minimum a photo of the prescription should be kept showing the name of the person the drug is prescribed to, the doctor's name and contact info as well as the name of the drug itself. This will help in the emergency filling of certain prescriptions that may be needed during a prolonged event.

Personal items such as hygiene supplies, blankets, books, reading glasses, as well as a change of clothing should be prepared. Also, each person should have a whistle that can be blown in case they are lost, trapped or for other emergency needs. It is commonly recognized by responders that three-long blast on a whistle is a sign of distress. You can blow a whistle far longer and louder than you can yell.

During a disaster, at minimum a change of socks and undergarments should be stored so it can be quickly accessed. Additional items such as a dust mask, work gloves, self-heating packs and wraps and sturdy boots are important. These should be stored so they can be quickly accessed in a bug out bag that can be grabbed in a hurry running out the door.

Items such as flashlights, battery or wind up radios, cell phone charger are all items often overlooked in disaster kits. Maps of the area, rope and basic tools may also prove to be essential items, depending on the type of disaster.

Special needs such as diapers, formula, baby wipes and diaper rash medicine are essential for small children. Supplies for dentures, contact lenses, hearing aids and medications are essential for senior adults. It should be noted that in special cases such as someone needing insulin, some way to keep that insulin cool may also be required.

For pets, a 3-day supply of food, water, a leash, crate, vaccination records, ID tags and a current photo in case they are separated are all advisable. Although every community should have shelter for pets during evacuations, these shelters may not have adequate food and water, not do they typically allow animals to roam free.

For more information, go to www.Texasprepares.org or www.ready.gov

Week 2b: Identify and plan for safeguarding of important documents.

If disaster was to force you and your family out of your home, what important documents might be important to take with you and how are those documents going to be stored? Copies of Birth Certificates, Passports, Social Security Cards, financial records, medical and prescription information are just a few of the documents that should be stored both in water proof document bags as well as electronically encrypted on a flash drive.

Photos of all members of the family can prove important in case people get separated. Health insurance information, prescription cards, insurance documents, vehicle titles, inventory of household items as well as copies of deeds, leases and mortgages are all examples of important information that might be critical in recovering from a disaster. These documents (or copies of them) should be stored in a water tight bag either as part of a go kit or at minimum something that can be quickly grabbed in case evacuation is needed

Week 2c: Storage of Emergency Supplies

Chances are that most of your emergency supplies will not be needed in most disasters, it is typically the prolonged events where food / water and shelter become critical. However, that should not lessen your resolve to become prepared for any event. Emergency Preparedness should be stored in something that is portable, durable and weather resistant. Rubberized tubs with tight fitting lids work well for storing items around the home. Smaller tubs can be placed inside of larger tubs to separate items. Backpacks work well for evacuations; however, are also limited as to how much they can carry. What is optimum is to have multiple kits for different purposes and types of disaster. These items should be stored in an area where they are easily accessible, not subject to temperature or moisture extremes and not subject to a high risk of flooding or building collapse. Most of all, kits should be stored in a place that critters such as mice or squirrels cannot access. Nothing is more frustrating than to build a great emergency kit to use during a disaster and then find that mice have helped themselves to food and nesting material.

Food should be stored in waterproof containers with a reminder to rotate food to make sure it stays fresh. A good option is food designed for hunters and people who backpack. Stores such as Cabela's, REI and Bass Pro shops typically have multiple options from self-heating meals to those you just add water to. A quick google search also will result in multiple options that you can purchase online. Listed below are some vendors that all have good reputations for quality, price and dependability.

Costco - <http://www.costco.com/all-emergency-food.html>

Sam's Club - <http://www.samsclub.com/sams/emergency-food-storage-kits/1760103.cp>

REI - <https://www.rei.com/search.html?q=food&ir=q%3Afood&page=1>

<http://heatermeals.com/>

<http://chef5minutemeals.com/about-us/>

For more information, go to <https://www.ready.gov/food>

Disaster supplies should be stored in locations that can be quickly accessed during or following a disaster. It is advisable, especially if you do maintain multiple kits, to keep some supplies in the trunk of your car or in a safe place at work. Some people maintain their kits in water tight storage boxes that can be stored on a back porch or in an outbuilding. It should be remembered however, that wherever supplies are stored, they should be easily accessible with any type of likely disaster.

It is also important to keep disaster kits maintained. Water, food, batteries and other items, even when designed for emergency kits, will have a shelf life; especially with the storage of water. Some types of plastic containers when exposed to sunlight and heat may actually excrete chemicals into the water that may in fact create additional harm. Even when stored in approved containers, water can also go stale, if nothing else impacting the taste of the water. A regular plan to change water, food, batteries and other items as appropriate should be established as part of the family disaster action plan. Food /water and other supplies that are approaching a pull date could then be used for non-emergency purposes or as will be discussed later in this program, in disaster exercises. Nothing needs to be wasted.

Week 2d: Specialized Kits (Pets, Medical, Search and Rescue)

In addition to the regular disaster go kits, there may be some need to create specialized kits for specific needs or to perform certain functions. These specialized kit may include pets, family members with special or medical needs, extreme cold weather or for specialized functions such as search and rescue. Although we have already talked about the need to customize disaster go kits to fit some of these needs, having a separate specialized kit is a viable option as well. Especially kits such as cold weather items that might otherwise take up room and serve little or no function during a typical Texas summer. Search and rescue kits might have additional items such as ropes, triage tags or tape and marking supplies (markers / spray paint). As before, unless the person was planning on conducting search and rescue functions, these materials may just take up space or add unnecessary weight.

One area where a specialized kit does make a lot of sense is medical supplies. Every kit should have some basic first aid supplies to assist any family member; however, what if you are the only person who can help your neighbors? Having a medical supply kit that you could grab and go help those who might be injured in your neighborhood makes more sense than dragging all of your other supplies with you. This kit may be as simple as just having some extra gauze pads, first aid tape, bandages and antiseptic wipes, or it may be as complicated as also having supplies to do makeshift splinting. One thing that is recommended in any medical go kit is keeping a record of all supplies, when they should be rotated out and replaced. This along with a reminder checklist on disaster first aid can help you keep the kit well stocked and ready when needed. Disaster Medical will be discussed more in depth during month four of Prepare in a Year Texas.

Theme Three: Prepare Your Family

Every family is unique in both its composition, its resources, and its needs. That is why every family must craft its own plan. However, every member of the family need to be included. This month's theme will discuss some of the specific challenges that children, elderly, special needs and even our pets can create. Challenges that with thought and planning can be overcome and included in your family's plan.

Week 3a – Helping Children Prepare / Deal with Disaster

Children do not respond to disasters the same way that adults do. Depending on their age, their coping skills as well as physical needs will be different. Recognizing these differences is the first step to understanding what needs to be done to help them prepare. Children do not typically have developed coping skills nor do they often fully understand what is happening. It is not uncommon for children to suffer from emotional trauma or exhibit behavioral problems during and following a disaster, especially if their fear is heightened by an evacuation, injury or they have to deal with a death. If children are helped through this process, taught how to appropriately deal with these stresses these symptoms and problems often subside.

Parents can make sure children are appropriately taught how to be ready for disasters. They need to know that the idea of your planning is to prepare for any type event and help them what to do when they happen. There are a number of outstanding programs and websites that parents can access to gain better insight of how to prepare their children and what can be done to help them learn to cope following an event. For more information, go to the Children in Disaster Page at the American Society of Pediatrics at <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Pages/Promoting-Adjustment-and-Helping-Children-Cope.aspx>

Another outstanding program that can help parents understand some of the unique needs of children in disaster is the Lutheran Social Service of Minnesota's Camp Noah. This is an outstanding program taught in a summer camp type format. For more information on Camp Noah go to <http://www.lssmn.org/campnoah/about/>

See Appendix Two for a Hand Out Chart.

Week 3b – Disasters and the needs of the Elderly

If you have elderly members in your family, especially those with medical, cognitive or mobility issues, it is important to understand and include their unique needs in your planning. Their go bag will need to be crafted for their needs, and those with cognitive disability may suffer from some of the same stress as children. Additionally, if the need arises to evacuate, not all shelters are equipped to handle geriatric evacuees. The CDC recommends that families with elderly members should keep specialized items ready, including extra wheelchair batteries, oxygen, catheters, medication, food for service animals and any other items you might need. Keep a list of the type and model numbers of the medical devices you require. Be sure to make provisions for medications that require refrigeration. Make arrangements for any assistance to get to a shelter.

For more information, read Ready.gov's *Preparing Makes Sense For Older Americans* or visit the American Red Cross Website.

Week 3c – Assisting Special Needs in Disaster

The term Special Needs can include people with physical, mental, or cognitive disabilities. Special Needs is often used as an umbrella underneath which a large number of afflictions can rest. For our purposes, the definition will be reduced a bit and be used to describe those who may need special assistance or care before, during and following disaster. Children and the Elderly could both fall under this definition and as with those groups, appropriate planning can save a lot of confusion and headaches when disaster strikes.

As the American Red Cross states “Mobility problems and hearing, learning, or seeing disabilities can add complication. It is important to plan ahead so you are better prepared for any urgent situation.” Some communities may have support networks that can assist in this process, however even with those who do not, the American Red Cross has an exceptional book available at http://www.redcross.org/images/MEDIA_CustomProductCatalog/m4240199_A4497.pdf

Some of the issues that may need to be addressed will be unique to your family's situation. Does anyone have a medical need for power such as a respirator or refrigeration (insulin as an example must be kept chilled)? Is this person ambulatory or will they need assistance to move? How will disaster impact their emotional and cognitive functions? These are all some of the questions that should be worked out.

Week 3d – Pets in Disaster

It is estimated that 1/3rd of those people who died as a result of Hurricane Katrina did so because they refused to leave their pet behind. US Law and standard operating procedures did not allow

animals to fly in military aircraft. Many victims died when they waved off rescue copters and died before a boat made it back to them. According to the FEMA Animals in Disaster Course, 65% of households with pets, would no more abandon them than they would a human child. This is why US laws were changed in the aftermath of Hurricane Katrina. However, that does not mean there are not certain provisions that must be taken to evacuate domesticated animals.

In spite of the fact that communities must make provisions for the evacuation and sheltering of pets, be aware that because of health and safety reasons, pets (other than service animals) usually are not permitted in emergency public shelters. Many communities create pet evacuation shelters; however, pets must be caged and families may still be required to deal with care and feeding. A great option is to prepare a list of family, friends, boarding facilities, veterinarians, and “pet-friendly” hotels that could shelter your pets in an emergency. This could be written into your family disaster action plan and quickly implemented when needed.

Theme Four: Disaster First Aid

Week 4a - Disaster First Aid -vs- American Red Cross

Many people have taken basic first aid classes provided by the American Red Cross or local Fire Departments. This type of training is important; however, during disasters the question changes from providing first aid for one person, to doing the most amount of good for the greatest number of people. This can be emotionally difficult and upsetting when it goes against our natural instincts and training. However, if ten people who are more critically injured suffer while one person is treated it becomes more understandable why disaster medical treatment is different. The purpose of this article is not to teach disaster medical, but to emphasize why individuals should seek training in it.

There are two basic skills that are important in disaster medical. First is the ability to recognize life threatening injuries such as airway obstruction, severe bleeding and shock. The second is the rapid search, rescue and triage of those injured. Training in disaster medical, such as that provided in the CERT program, is based on two reasonable assumptions. The first is that during larger events, the number of injured survivors could exceed the local capacity for treatment. The second is that properly directed, less injured survivors can be recruited to assist the more critically injured. The key is properly directed. As one of the goals of disaster medical is to provide the greatest good for the greatest number of people, a rapid but thorough triage of the disaster scene is an important place to start.

At no time, should anyone attempt to conduct search and rescue operations by themselves. A three-man team inside doing rapid triage and assessment is preferable with a fourth person serving as team leaders, waiting outside to both monitor and determine further actions needed.

The term Triage literally means to sort. The injured are sorted into those with little or minor injuries, those injuries that are non-life threatening but still require treatment and those who need immediate treatment. In most triage training these survivors are labeled green, yellow and red respectively. There is a 4th triage designation of black meaning dead or death is imminent; however, care must be exercised in using this designation as it can have severe psychological impact on others as well as most people are not qualified to make such a critical decision. With those people who might

otherwise be labeled black, rapid treatment to make them comfortable and ease immediate risk is prudent, and notify the rest of your team of their status. Inside a building or area, all members of a team should remain in line of sight, leapfrogging each other as they conduct rapid assessment of their condition.

Teams should deal with immediate issues such as bleeding, respiratory issues and shock, but then move on to check other victims as rapidly as possible. Once every person is assessed, teams should report back to the team leader. Then a determination can be made to treat or attempt to free and transport victims per the urgency of their injuries.

Green survivors can also be recruited to help control bleeding or help with other injuries. They can also be used to monitor others or assist in the evacuation of less injured victims.

in disaster, medical operations, airway obstruction, bleeding, and shock are “killers” because without treatment they will lead to death. The priority of disaster medical operations is to attend to those potential killers by:

- ♣ Opening the airway
- ♣ Controlling excessive bleeding
- ♣ Treating for shock

Care should always be taken to protect the team from both hazards directly caused by the disaster and from potential contamination by blood borne pathogens and unpredictable actions of victims.

For more information on Disaster medical and training available go to https://www.fema.gov/media-library-data/1446216182950-02eb347496f7038f9856601f42da700b/Section_6_PM_Unit_3.pdf

Or

<http://www.redcross.org/take-a-class/disaster-training>

Week 4b - Care for Injured

Disaster Medical is often one of the most difficult, yet critical functions and skillsets that a person may need to put into action. However, in a disaster situation, where traditional responders are overwhelmed, your rapid assistance may make the difference between life and death. Your

family members, neighbors or even complete strangers may need your assistance and intervention, long before outside help arrives.

As discussed last week, in disaster medical operations, the goal is to do the greatest good for the greatest number of people. In teaching Disaster Medical, many people use the acronym START or Simple Triage And Rapid Treatment. History has proven that 40% of disaster survivors can be saved with simple (rapid!) medical care. START is based on the premise that a simple medical assessment and rapid treatment based on that assessment will yield positive, often lifesaving results.

In the initial moments following a disaster, a rapid assessment of the scene and injuries may be critical. How many victims are there? Are they trapped or injured? Do I have the resources available to assist? How long until other help might be expected. These are all questions that need to be asked and answered as quickly as possible. Disaster Medical is far different than what a person is taught in basic first aid.

The first thing you should do upon arriving at the scene of an incident is to try to stay calm, look around, and get an overview of the scene. These visual surveys give you an initial impression of the overall situation, including the potential number of patients involved, and possibly, even the severity of their injuries. The visual survey should enable you to estimate initially the amount and type of help needed to handle the situation.

Types of injuries that can be expected will vary depending on the type of disaster; however, the process of identifying and establishing priorities is similar. As discussed last week, the priority must be given to airway obstruction, bleeding, and shock because without your rapid intervention and basic treatment death is a realistic possibility. Although the goal of START is to do the greatest good for the greatest number of people, often small measures taken to intervene with people suffering from one of these killers might increase their odds of survival.

When first assessing someone injured by disaster, look for breathing, profuse bleeding and signs of shock. Try to identify how the injury occurred if possible as well as the risk for additional injury if the patient is not moved. If they are conscious, ask questions to identify their level of coherence and pain.

Once survivors are triaged or sorted based on the degree of injury and prioritized for treatment, rapid treatment of those injuries can begin. It should be remembered that in disaster, medical operations, airway obstruction, bleeding, and shock are “killers” because without treatment they will lead to death. The priority of disaster medical operations is to attend to those potential killers first by opening the airway, controlling excessive bleeding and treatment for shock. However, personal safety must be maintained at all times. Before providing any treatment, basic precautions including wearing appropriate PPE (Personal Protective Equipment) including nitrile or other non-latex medical gloves. Gloves are not just important to protect you from blood borne pathogens, but to help reduce the risk of infection of your patient. It is also important to remember the following guidelines in approaching injured people, especially if they are panicked or disoriented.

When ready to approach a survivor:

1. If the survivor is conscious, be sure he or she can see you.
2. Identify yourself by giving your name and telling them why you are there

3. ALWAYS request permission to treat an individual. If the individual is unconscious, he or she is assumed to have given “implied consent,” and you may treat him or her. Ask a parent or guardian for permission to treat a child, if possible.
4. Whenever possible, respect cultural differences. For example, in some Muslim traditions it is customary to address the male when requesting permission to treat a female member of his family.
5. Remember, all medical patients are legally entitled to confidentiality (HIPAA). When dealing with survivors, always be mindful and respectful of the privacy of their medical condition.

Week 4c - Care for Self

During times of disaster it is common for emotions to be heightened, both by adrenaline running wild and sincere compassion for those impacted. This may be especially true when those needing assistance are friends and family members. Adrenaline is a natural physiological reaction to stress related to the body’s fight or flight response. It can be beneficial in providing extra energy that may be needed to rescue or assist somebody; however, it can also be harmful when the person responding pushes too hard or does not allow themselves time to decompress. It is important that everyone recognize the signs of stress in themselves as well as those around them and take appropriate steps to abate the situation.

Stress may manifest itself in many ways during a disaster. Those involved in rescue or caring for survivors may experience similar reactions as those they assist. Responders may face compassion fatigue and lose the ability to effectively engage with those they try to help. They may face feelings of anxiety, burnout, fatigue, apathy or a general feeling of malaise. They may suffer from hypersensitivity and overreact to even minor situations. They may exhibit physical symptoms including headaches, dizziness, sleep disturbances or substance abuse issues. In many ways, the stress responders face, even volunteer responders, is very similar to what soldiers face as a result of battle. Care should be taken in how a person exhibiting these symptoms is approached, as people often fear being tagged with mental health issues.

Self-care is critical to the wellbeing and effectiveness of responders. Creating balance between hours worked, sleep and time to decompress. Identify and create a support structure of trusted friends, coworkers and others who you can trust to tell you when you need to take a break. Use humor when possible to break the tension and relieve stress. There are many techniques that can be used to manage the stress that you might face:

- Talk with someone about your feelings - anger, sorrow, and other emotions - even though it may be difficult.
- Seek help from professional counselors who deal with post-disaster stress.
- Do not hold yourself responsible for the disastrous event or be frustrated because you feel you cannot help directly in the rescue work.

- Take steps to promote your own physical and emotional healing by healthy eating, rest, exercise, relaxation, and meditation.
- Maintain a normal family and daily routine, limiting demanding responsibilities on yourself and your family.
- Spend time with family and friends.
- Participate in memorials.
- Use existing support groups of family, friends, and religious institutions.

Ensure you are ready for future events by restocking your [disaster supplies kits](#) and updating your family [disaster plan](#). Doing these positive actions can be comforting.

The emotional toll that disaster brings can sometimes be even more devastating than the financial strains of damage and loss of home, business, or personal property.

- Everyone who sees or experiences a disaster is affected by it in some way.
- It is normal to feel anxious about your own safety and that of your family and close friends.
- Profound sadness, grief, and anger are normal reactions to an abnormal event.
- Acknowledging your feelings helps you recover.
- Focusing on your strengths and abilities helps you heal.
- Accepting help from community programs and resources is healthy.
- Everyone has different needs and different ways of coping.
- It is common to want to strike back at people who have caused great pain.

Children and adults with limited cognitive ability are of special concern in the aftermath of a disaster. Where adults typically have some form of support system that can help them process disaster related stress, children often have not yet developed appropriate coping skills. Similarly, those adults with cognitive disorders may also have trouble coping and require special handling.

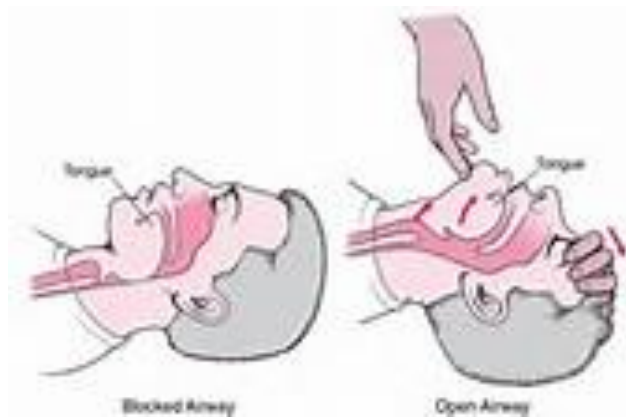
Even individuals who experience a disaster “second hand” through exposure to extensive media coverage can be affected. Many people remember how in spite of the fact that the September

11th attacks occurred thousands of miles away, because of the scope of the event and the wall to wall media coverage many people across this nation experienced disaster related stress including some reaching the level requiring professional treatment.

Week 4d - Further Training

Airway Obstructions

In treating breathing difficulties, the most common airway obstruction is the victims own tongue. Especially in unconscious or semi-conscious people the tongue may relax and fall to the back of the throat either fully or partially blocking the airway. This can often be treated by repositioning the head using what is known as the head tilt/ chin lift method.



If this method works and breathing has been restored, the clear airway still must be maintained by keeping the head tilted back. One option is to ask another person to hold the head in place; even another survivor with minor injuries could do this. The airway also can be maintained by placing soft objects under the survivor's shoulders to elevate the shoulders slightly and keep the airway open.

You should always be concerned with head, neck, or spinal injuries (all of which are common in structural collapses). Used properly, the Head-Tilt/Chin-Lift method for opening an airway causes little spinal manipulation because the head pivots on the spine. Remember the importance of opening the airway as quickly as possible. When treating the three killers, checking for airway obstruction is always first.

Controlling Bleeding

Uncontrolled bleeding initially causes weakness. If bleeding is not controlled, the survivor will go into shock within a short period of time and finally will die. An adult has about 5 liters of blood. Losing 1 liter can result in death.

There are three types of bleeding and the type can usually be identified by how fast the blood flows:

- ♣ Arterial bleeding. Arteries transport blood under high pressure. Blood coming from an artery will spurt.
- ♣ Venous bleeding. Veins transport blood under low pressure. Blood coming from a vein will flow.
- ♣ Capillary bleeding. Capillaries also carry blood under low pressure. Blood coming from capillaries will ooze.

There are also three main methods for controlling bleeding:

- ♣ Direct pressure
- ♣ Elevation
- ♣ Pressure points

Direct pressure and elevation will control bleeding in 95% of cases

Direct Pressure:

- Place direct pressure over the wound by putting a clean dressing over the wound and pressing firmly.
- Maintain pressure on the dressing over the wound by wrapping the wound firmly with a pressure bandage and tying with a bow.

Elevation:

- Elevate the wound above the level of the heart - The body has great difficulty pumping blood against gravity; therefore, elevating a wound above the heart will decrease blood flow and loss of blood through the wound
- Can be used in combination with direct pressure

Pressure Points -Put pressure on the nearest pressure point to slow the flow of blood to the wound.

Use the:

- Brachial point for bleeding in the arm
- Femoral point for bleeding in the leg
- Popliteal point for bleeding in the lower leg

The pressure point to use depends on the location of the wound. The correct pressure point is between the wound and the heart.

Use of direct pressure on pressure points and elevation will manage most bleeding. However, if bleeding cannot be stopped using these methods and professionals are delayed in responding, a tourniquet may be a viable option to save a person from bleeding to death. However, **a tourniquet is**

absolutely a last resort (life or limb) when other preferred means have failed to control bleeding in an arm or a leg.

While the use of a tourniquet is extremely rare, it may have a use when part of an extremity is amputated or crushed and bleeding cannot be stopped by any other preferred means.

- A tourniquet is a tight bandage which, when placed around a limb and tightened, cuts off the blood supply to the part of the limb beyond it.
- A tourniquet can do harm to the limb, but it can halt severe blood loss when all other means have failed and professional help will not arrive in time to help stop the bleeding before the person dies.
- Use any long, flat, soft material (bandage, neck tie, belt, or stocking). Do not use materials like rope, wire, or string that can cut into the patient's flesh.
- To tie a tourniquet:
 - Place the tourniquet between the wound and the heart (for example, if the wound is on the wrist, you would tie the tourniquet around the forearm).
 - Tie the piece of material around the limb.
 - Place a stick, pen, ruler, or other sturdy item against the material and tie a knot around the item, so that the item is knotted against the limb.
 - Use the stick or other item as a lever to twist the knot more tightly against the limb, tightening the bandage until the bleeding stops.
 - Tie one or both ends of the lever against the limb to secure it and maintain pressure.
 - Mark the patient in an obvious way that indicates that a tourniquet was used and include the time it was applied.
 - Do not loosen a tourniquet once it has been applied.
 - Only proper medical authorities should remove a tourniquet

Burns

Burns may be caused by heat, chemicals, electrical current, or radiation. The severity of a burn depends on:

- The temperature of the burning agent
- How long the survivor was exposed
- Area of the body affected
- Size of the burned area
- Depth of the burn

Always use extreme caution around burn survivors when there is no obvious cause for the burns. If the burns were caused by chemicals or radiation, you may be at risk.

Recognizing Burn Severity

The skin has three layers. Burns may affect one, two, or all three layers of skin. The epidermis is the outer layer of skin. It contains nerve endings and is penetrated by hairs. The dermis is the middle layer of skin. It contains blood vessels, oil glands, hair follicles, and sweat glands. The subcutaneous layer is the innermost layer of skin, also called the hypodermis. It contains blood vessels and fat and overlies the muscle. Skin layers are used to determine burn classifications.

Burn Classifications

Burns are classified into three degrees of severity, depending on the skin layers affected by the burn. The three categories are superficial, partial thickness, and full thickness. Superficial burn Skin layer:

Epidermis Symptoms:

- Reddened, dry skin
- Pain
- Possible swelling

Partial thickness burn Skin layer:

- Epidermis
- Partial destruction of dermis Symptoms
- Reddened, blistered skin
- Wet appearance
- Pain
- Possible swelling

Full thickness burn Skin layer:

- Complete destruction of epidermis and dermis
- Possible subcutaneous damage Symptoms:
- Whitened, leathery, or charred (brown or black)
- Painful or relatively painless

Treating Burns, you have three objectives when treating burns: cool the burn, avoid hypothermia, and cover to prevent infection.

Trauma

Identifying Neck, Spine, and Head Injuries

Before you go any further, you must check for neck, spine, and head injuries. A neck, spine, or closed-head injury is extremely serious.

This type of injury must be identified immediately so that important precautions can be taken. Common signs of a neck, spine, or closed-head injury are:

- Change in consciousness
- Inability to move one or more body parts
- Severe pain or pressure in the head, neck, or back
- Tingling or numbness in extremities
- Difficulty breathing or seeing
- Heavy bleeding, bruising, or deformity of the head or spine
- Blood or fluid in the nose or ears
- Bruising behind the ear
- Raccoon eyes (bruising around the eyes)
- Uneven pupils
- Seizures
- Nausea or vomiting
- Mechanism of injury that could cause this type of injury, such as when a survivor is found under collapsed building material.

A survivor who exhibits any of these signs should be handled so as to avoid further injury.

If someone has a neck, spine, or head injury, your main goal is to do no harm.

To avoid further injury, keep the head, neck, and spine in a straight line during the assessment. This is called "in-line stabilization." Continue to keep it straight as you treat other life-threatening injuries.

Shock

Shock is a condition that occurs when the body is not getting enough blood flow. When blood doesn't circulate, oxygen and other nutrients are not carried to tissues and organs. Blood vessels begin to close and organs are damaged and, if left untreated, will shut down completely.

Shock can worsen very rapidly. Remaining in shock will lead to the death of:

- Cells
- Tissues
- Entire organs

The main signs of shock that you should look for are:

- Rapid and shallow breathing
- Capillary refill of greater than 2 seconds
- Failure to follow simple commands, such as "Squeeze my hand"

TREATING FOR SHOCK: The body will initially compensate for blood loss and mask the symptoms of shock; therefore, shock is often difficult to diagnose. It is possible — and, in fact, common — for an individual suffering from shock to be fully coherent and not complaining of pain. Pay attention to subtle clues, as failure to recognize shock will have serious consequences. Avoid

rough or excessive handling. It is important to maintain the survivor's body temperature. If necessary, place a blanket or other material under and/or over the survivor to provide protection from extreme ground temperatures (hot or cold). Position the survivor on his or her back and elevate the feet 6 to 10 inches above the level of the heart to assist in bringing blood to the vital organs. Although survivors who are suffering from shock may be thirsty, they should not eat or drink anything initially because they may also be nauseated.

EVALUATE BREATHING: Note if the survivor's breathing is rapid and shallow, i.e., more than 30 breaths per minute.

EVALUATE CIRCULATION: One way to test for circulation is the blanch test. A good place to do the blanch test is the palm of one hand. Sometimes, a nail bed is used. The blanch test is used to test capillary refill. You should see the color return to the tested area within 2 seconds. Because the blanch test is not valid in children, mental status should be used instead as the main indicator. Another way to check for circulation is the radial pulse test. This is an alternative to the blanch test and can be used in the dark or where it is cold. To perform the radial pulse test, place your middle and ring finger over the interior of the survivor's wrist where the thumb meets the arm. A normal pulse rate is 60-100 beats per minute.

See Appendix Three for a handout on Performing Head to Toe Assessments

Theme Five: Evacuation and Sheltering in Place

Need for alternative shelter

Where to live when your home is no longer habitable

There are times, such as the Memorial Day Weekend and All Saints Flooding events, where your family may not be able to remain in your home, at least for a period of time. This is the topic for Prepare in a Year Texas for this week, why thinking about alternative shelters before a disaster strikes is so important. Having the means to shelter your family from rain, cold, wind or other elements is something that can make a big difference in your family's comfort.

Shelter can be as simple as a lean to shelter created with tarps, plastic and / or sticks and brush. It can also be something more elaborate such as an Army Surplus tent complete with provisions for cooking inside. Each person will need to decide what level of comfort and preparedness is appropriate for them. It will also depend on the time of year, the type of disaster that caused your displacement and the conditions your family faces. A young family with children will have different requirements as a couple. A family that includes elderly members will require much provisions than one that does not include them. Shelter needs during January in Texas is much different than it will be in August. Understanding and perceiving these differences is where this week's preparedness needs to begin.

In your Go Kit, a few simple items can help facilitate the creation of a usable shelter, even if it is only until other resources are available. Having a tarp, a roll of plastic, some rope and some duct tape can help facilitate building a pretty decent shelter. Using the rope to help support the tarp between trees and the plastic to create a dry floor and sides can make a big difference to protect yourself from the rain or other elements. By rolling the plastic up the walls and using the tape to secure the corners so water cannot get in, it is possible to create a warm, safe and most of all dry shelter that can get you through until other resources are available.

Week 5a - Reasons to evacuate

One of the big issues in any disaster is evacuation. When should I evacuate? Where should I go? What is the difference between a recommended and a mandatory evacuation? These are some of the issues that will be explored this week in Prepare in a Year Texas.

Not all disasters require a person or family to evacuate. However, even when an event will not directly impact your home, there may still be reason to consider leaving, even if only for a short period. As an example, if you live on high ground, you might not be worried as much about an incoming rain storm. But your only access to the outside world is crossing a roadway or bridge that is known to flood, it might still be advisable to temporarily evacuate so you do not become trapped. Knowing how different events can impact your life is the first step in developing an evacuation plan.

In addition to mandatory or recommended, evacuations generally fall into two different categories, planned and urgent. In the case of a planned evacuation, you may have additional time to plan for what to take with you, carefully pack your car and take other measures to prepare your home for your absence. In the case of an urgent evacuation, you may only have a matter of minutes from the time you get a warning to the time you need to be heading out. However, no matter what, it is advisable to follow evacuation orders and to have certain provisions ready to take with you (these provisions will be talked about in Week Three this month). If you have not already done so, it is advisable to be connected with the local emergency management agency to immediately know when evacuation advisories are made.

With the approach of a hurricane or some wildfires, you may have an extended period of time to plan for an orderly evacuation. Although many people think hurricanes are more of a danger along coastal areas, the intense rainfall and tropical storm force winds may extend many miles inland. During wildfires, people downwind not only must deal with smoke, the fire is often moving

in that direction. In these types of events it is possible to plan what you need to take with you and even pack your vehicle in an orderly manner. In some cases, small mitigation measures may be taken such as placing a sprinkler on the roof of the home to reduce the risk from hot embers. Other measures such as creating a defensible space around your home should have already been done.

For more information on these types of measures contact your local Emergency Management Agency or look at <http://texasforestservice.tamu.edu/PrepareYourHomeforWildfire/>

Unexpected flash flooding or storm events such as was seen in the 2015 Memorial Day Weekend floods may require more urgent evacuations. In these cases, you may have less than a few minutes to grab everything that you may need to take with you. This is where having a plan, having a go kit and exercising the scenario can be a great benefit. If you have not already put together a go kit with emergency supplies, comfort items and important paperwork then go back and review the October newsletters or contact BR3T for a list.

Week 5b - Seeking Shelter –vs- Shelter in Place

Just as there are times when the safest option is to evacuate, there are emergencies where the safest option is to stay put and to take certain steps to protect yourself where you are. Knowing what to look for and what to do needs to be something that is incorporated into your family emergency action plan. Additionally, it is important to recognize there is a significant difference between official warnings to seek immediate shelter or to shelter in place. Regardless, of which type of sheltering you may need to do, it is important to take appropriate steps to prepare in advance.

In the case of an imminent tornado or outbreak, the advice would be to seek immediate shelter. If you have a basement or a storm shelter already, stocking this with certain supplies may be enough preparation. However, if you do not already have a designated storm shelter, find a ground floor area towards the inside of the home, away from windows and providing some protection from

falling and flying debris. If resources allow, there are many great online resources in building a tornado safe room or shelter including <https://www.ready.gov/tornadoes>.

The advice to Shelter in Place would be used in the case of a chemical or other hazardous material situation and in some cases, such as smoke or other air pollution creating respiratory issues. As information on these types of events is typically provided via TV or radio, it is advisable to have access inside your shelter to these items. As it may be a prolonged time you will need to shelter, it is also advisable to have your go bag with food, water and comfort items with you.

Shelter in Place means selecting a small interior room with few or no windows and taking certain steps to increase your safety. It does not always mean sealing off the room with plastic and duct tape, but does mean isolating this space from the outside. A checklist of how to shelter in place is included below.

It should also be noted, especially in the case of a hazardous material release, that even if you are not directly downwind, other conditions including the wind shifting may put you in danger. The greatest opportunity for safety is to follow the advice of designated officials on when and where to evacuate. Local officials on scene are the best source of information for your particular situation. Following their instructions regarding shelter as well as cleanup methods afterwards will always be the best choice.

For more information go to

https://www.redcross.org/images/MEDIA_CustomProductCatalog/m4340182_shelterinplace.pdf

Week 5c - What to take with you?

Evacuations are far more common than many people realize. Fires, floods, hurricanes are just a few reasons an evacuation may be called for. As previously discussed, when an evacuation is ordered, local officials are making a clear declaration that conditions are expected to be too dangerous and remaining maybe life threatening. When evacuations become necessary, it is important to have some degree of preparation as to what you need to take with you.

The amount of time you have to leave will depend on the hazard. If the event is a weather condition, such as a hurricane, you might have a day or two to get ready. However, many disasters allow no time for people to gather even the most basic necessities, which is why planning ahead is essential. Hopefully, much of this planning has already been done during earlier steps recommended in this Prepare in a Year Texas program. Just as a refresher, some

of those messages will be repeated here.
Follow these guidelines for evacuation:

- Plan places where your family will meet, both within and outside of your immediate neighborhood. This should be part of the Family Disaster Action Plan developed during the first month. A template for this plan is available at www.br3t.org.
- If you have a car, keep a full tank of gas in it if an evacuation seems likely. Keep at least a half tank of gas in it at all times in case of an unexpected need to evacuate. Gas stations may be closed during emergencies and unable to pump gas during power outages. Plan to take one car per family to reduce congestion and delay.
- As it is possible that power or communications may be disrupted, it is also possible that credit and ATM cards will not work. It is advisable to have an emergency stash of cash available for emergencies and evacuations.
- Become familiar with alternate routes and other means of transportation out of your area. Choose several destinations in different directions so you have options in an emergency.
- Leave early enough to avoid being trapped by severe weather.
- Follow recommended evacuation routes. Do not take shortcuts; they may be blocked.
- Be alert for road hazards such as washed-out roads or bridges and downed power lines. Do not drive into flooded areas.
- If you do not have a car, plan how you will leave if you have to. Make arrangements with family, friends or your local government.
- Take your Go Kit unless you have reason to believe it has been contaminated.
- Listen to a battery-powered radio and follow local evacuation instructions.
- Take your pets with you, but understand that only service animals may be permitted in public shelters. Pet shelters should be available.

If time allows:

- Call or email the out-of-state contact in your Family Disaster Action Plan. Tell them where you are going and when you expect to arrive.
- Secure your home by closing and locking doors and windows.
- Unplug electrical equipment such as radios, televisions and small appliances. Leave freezers and refrigerators plugged in unless there is a risk of flooding. If there is damage to your home and you are instructed to do so, shut off water, gas and electricity before leaving. **NOTE: If you turn off Gas, only an authorized Gas Company representative should turn gas back on when you return.**
- Leave a note telling others when you left and where you are going.
- Wear sturdy shoes and clothing that provides some protection such as long pants, long-sleeved shirts and a cap.
- Check with neighbors who may need a ride.

If it is necessary to evacuate to mass shelters, it is important to remember these basic rules:

- Cooperate with shelter managers and others sharing the shelter. Living with many people in a confined space can be stressful, difficult and generally unpleasant.
- Restrict smoking to designated areas outside of the shelter and away from any doorway or ventilation that might draw the smoke inside. Always ensure smoking materials are disposed of safely.
- Remember that alcoholic beverages or other intoxicants are not allowed.
- Remember that weapons are prohibited as are acts or threats of violence.
- Remember that although communities are required to make provisions for sheltering of pets, not all shelters will be equipped for or accept animals.
- There is no requirement for a shelter to co-locate pets with humans seeking shelter. Pets may also be required to remain in cages with the exception of leashed exercise.

When there is no other choice to evacuate, having a checklist of items to take with you as well as other steps can prove valuable. It is important to take important records that may be needed for identification, prescriptions and insurance.

Week 5d - Returning Home

When you are allowed to return following an evacuation, it is important to closely inspect the home and conditions to ensure it is safe. What may have changed while you were gone? Have basic lifelines you may rely upon been restored? These may not seem that important to think about before a disaster, but when our minds are focused more on cleaning up and trying to get our lives back to some sense of normalcy, it is easy to overlook certain lifelines that might be critical.

What utilities were impacted? Was electricity or gas shut off? Were they exposed to flood water or otherwise damaged? What other lifelines were impacted? If you evacuated for flooding, how much flooding occurred and what got wet? IT may not always be just allowing something to dry out, certain types of mold can create a toxic environment and endanger your life as well as those of family members. This mold could be behind wallboard or under flooring. Were electrical outlets exposed to flood water, if so each plug should be inspected by a qualified electrician to make sure corrosion does not result in a fire. With gas, is there corrosion or other damage that might result in leaks? These are just a few things to look at.

Walk around the home and look for unusual cracks, settling or areas that now seem spongy or out of level. There may be damage to the foundation or pier block that have been undermined or knocked out. Is the building structurally sound, including all windows, doors and the roof? Is the building sanitary to live in or will it require extensive cleanup of debris, hazardous materials or waste water? What about external lifelines such as transportation routes, schools, churches, stores and other things we rely upon, but do not always think about until we no longer have access? These are just a few things to think about when returning home. It is recommended that you follow the attached checklist for returning home.

Returning to a damaged home can be both physically and mentally challenging. Above all maintain situational awareness and caution.

- Keep a battery powered radio available so you can listen for emergency updates.
- Wear sturdy boots and shoes.
- Before going inside, walk carefully around the outside,
 - looking for obvious damage,
 - looking for cracks in foundation, chimneys, roof
 - listening for sounds such as crackling, creaking or hissing,
 - smell for smoke, chemical smell etc.
- If home was structurally damaged or damaged by fire do not reenter until authorities say it is safe to do so.
- Notice if doors or windows are suddenly jammed, out of square or difficult to open. This may be caused by structural damage.
- As you first enter home, stop, smell, listen and look for problems.
- If disaster caused flooding inside home, abate water, open doors and windows and dry out. Remember that flood waters often carry chemicals, sewage and other debris that must be cleaned up appropriately.
- Throw out or disinfect anything that comes into contact with flood waters.

Theme Six: Eliminate Hazards in your Home and Workplace

Week 6a - Personal Safety

One of the most important aspects of the Prepare in a Year Texas challenge is learning about disaster safety. This month we will cover four specific areas; personal safety, flood safety, fire safety and utility safety. These discussions will be made as if a disaster is currently ongoing; however, thinking about each of these areas in the preparedness phase is important. Too often, people survive an initial event only to be injured or worse trying to help others.

Professional Responders such as police, fire, search and rescue and others place safety as the paramount aspect of any response. They would no more consider operating in a

dangerous environment without personal protective equipment (PPE's) than a scuba diver would think of going on a deep dive without his or her scuba tanks. Besides face shields, safety glasses, hard hats, and safety shoes, protective equipment includes a variety of devices and garments such as goggles, coveralls, gloves, vests, earplugs, and respirators. Many of these items were recommended for inclusion in your emergency kits and go bags.

Hard hats can protect you from certain injuries resulting from falling or flying objects, as well as provide some protection from head injuries resulting from fixed objects you might not see in reduced light or high chaos conditions. Sturdy shoes provide a degree of protection for your feet and well as support for your ankles and lower legs. Gloves and durable clothing provide some protection from sharp objects as well as reduce the risk of scrapes or abrasions.

Safety goggles or glasses can provide some protection of the eyes from flying debris as well as objects, particles, sand, dirt, mists, dusts, and glare that maybe encountered in a disaster environment. Wearing earplugs or earmuffs can help prevent damage to hearing. Exposure to high noise levels can cause irreversible hearing loss or impairment as well as physical and psychological stress. Earplugs made from foam, waxed cotton, or fiberglass wool are self-forming and usually fit well. Clean earplugs regularly, and replace those you cannot clean.

When appropriate in the disaster environment it is important to guard against adverse health effects caused by breathing air contaminated with harmful dusts or residual smoke. Respirators may also help in limiting exposure or spread of certain biological threats such as a cold virus.

Respirators generally cover the nose and mouth or the entire face or head however, it should be remembered that respirators do not provide protection against low oxygen or in atmospheres otherwise threatening to life such as might be found in a chemical spill or release.

At no times should anyone exceed their level of training in responding to an event. As an example someone who is not specifically trained to respond to hazardous material events should not approach an industrial or transportation accident or spill. In cases such as these, it is important to remember two specific rules and concepts. The first is to move upwind, uphill and upstream of any event and the second is called RAIN. RAIN stands for Recognize that an event has occurred, Avoid getting near or exposed to the threat, Isolate the event from others (prevent others from entering the area), and Notify appropriate authorities.

More information on personal as well as other safety will provide over the next few weeks.

Week 6b - Flood Safety

Most people have heard the saying “Turn Around, Don’t Drown”, but every storm we still see people driving across flooded roadways. However, there are several reasons why driving through flood waters is not the best idea. This is one of the areas of flood safety that will be touched upon this week.

In Central Texas, there are many roadways that cross areas subject to both traditional and flash flooding. Too often, drivers underestimate the power of floodwater or overestimate their skills and abilities and try to cross flooded roadways. This may result in vehicles getting stuck, washed downstream and in some cases the death of occupants. Six inches of water can cause tires to lose traction and begin to slide, twelve inches of water can float many cars. Even in vehicles with high clearance, buoyancy caused by air in the tires can carry off trucks, SUVs and most other vehicles. In addition, during flash flood events, waters may rise rapidly as you are crossing trapping you in your vehicle or washing you off the roadway. According to Texas Department of Transportation, driving through flash flood and low water crossings is the leading cause of weather related deaths in Texas.

In addition to the possibility of getting swept off the roadway, driving through floodwaters may also result in a ticket, jail time or other legal action. Driving around a road closed sign can result in fines of \$2000 and/or up to 180 days in jail. Tampering with a road closed sign or other warning device can result in an additional \$1000 fine and up to 2 years in jail or both. It is not just your life or the lives of your passengers you place at risk, you also risk the lives of responders and others who might be called upon to rescue you.

But driving through floodwater is not the only safety issue of flooding events. Even wading through floodwater can be dangerous. Never try to wade, swim or otherwise cross rapidly moving water. In addition to the risk of being swept off your feet, the danger of being struck by floating debris is far greater. As can be observed from just watching a flooded river for a few minutes, debris ranging from items left near the shoreline to large trees will often be seen floating downstream. The severe churning action of flood hydraulics make this risk even more dangerous. Additionally, chemical contamination as well as biological risk resulting from decomposition and breaching of septic systems may make floodwaters unhealthful. For these reasons, any exposure to floodwater should be rinsed off as quickly as possible.

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

Steps to improve flood safety:

Sign up for Alerts - The Advanced Hydrologic Prediction Service of the National Weather Service provides [RSS feeds](#) for observed forecast and alert river conditions to help keep the public informed about local water conditions.

Prepare Your Home:

- ☐ If you have access to sandbags or other materials, use them to protect your home from flood waters if you have sufficient time to do so. Filling sandbags can take more time than you may think.
- ☐ Have a professional install check-valves in plumbing to prevent flood waters from backing up into the drains of your home. Make sure your sump pump is working and consider having a backup. Make sure your electric circuit breakers, or fuses, are clearly marked for each area of your home.
- ☐ Since standard homeowner's insurance doesn't cover flooding, ensure coverage by contacting your insurance company or agent to purchase flood insurance. This must be done before there is even a threat of flooding as insurance companies stop issuing policies if there is a threat of flooding. (i.e. an approaching hurricane). Many flood insurance policies take at least 30 days to go into effect so even if you can buy it as a storm is approaching, it may not protect your investment.

Don't go into a basement, or any room, if water covers the electrical outlets or if cords are submerged. If you see sparks or hear buzzing, crackling, snapping or popping noises --get out! Stay out of water that may have electricity in it!

If told to evacuate, do so immediately. Be sure to lock your home as you leave. If you have time, disconnect utilities and appliances.

Week 6c - Fire Safety

This week, the topic of Prepare in a Year Texas is fire safety. As a term fire safety can be defined as steps taken to reduce the risk of and destruction caused by fire. However, for the purposes of this article, this definition will be expanded to include personal safety, fire science and extinguishing small

fires. This topic will include both structure fires limited to a single or small group of homes as well as wild fires which may also consume structures including homes. At no times, should this article be interpreted as being the final authority in becoming fire safe, but instead should be used to provide some insight of how you and your family might work towards that end. Links will be provided where additional information can be found.

Per statistics published by the National Fire Protection Association (NFPA) there were over 1.3 million fires in the United States during 2015. Of those 500,000 were structure fires that resulted in 2,685 deaths, 13,000 injuries, and \$10.3 billion in property damage. During that same time, there were over 68,000 wildfires that burned more than 10 million acres. In 2015, a total of 4,621 structures were destroyed by wildfires including more than 2,600 homes and 10 commercial buildings. However, there are things that individuals can do to reduce risk or at minimum reduce the extent that fire can impact your family.

For more information go to <http://www.redcross.org/get-help/prepare-for-emergencies/types-of-emergencies/fire>

There are many possible causes for a house fire including cooking accidents, electrical shorts and fireplace/woodstove accidents. Be aware of the hazards in your home, how you can mitigate or reduce risk and most of all what you need to do if your prevention efforts fail. Every home should have working smoke detectors, a Class ABC fire extinguisher (see article below) and an escape plan that each member knows how to get out and if safe, fight a small fire after everyone is out. At no time, should anyone attempt to fight any fire that has not had some level of training as mistakes made during this attempt may in fact aggravate the situation or place that person in extreme danger. Portable fire extinguishers have two functions: to control or extinguish small fires and to protect evacuation routes that a fire may block directly or indirectly with smoke or burning/smoldering materials. They are designed to be the first line of defense in fighting small fires, and they are only effective when the agent is properly applied to fight the fire. A good training video can be found at <https://www.youtube.com/watch?v=CRMgFPzQEn0>; however, if possible live

training should be pursued.

Wildfire is another threat in many parts of Central Texas. With a combination of dry brush, high temperatures, low humidity and an ignition source, even a small fire can explode into a raging inferno threatening crops, habitat, homes and lives that might get in the way. However proper steps and planning taken before an event can reduce both the risk and the impacts of fire on your family.

Creation of defensible space around a home and other structures can greatly reduce risk. Although it cannot stop possible ignition by embers, creating a sufficient buffer zone between a wildland area and a structure can slow or halt spread to that structure. This space reduces the risk of direct flame and radiant heat. For more information about defensible space zones and other preparedness techniques go to www.firewise.org. or <http://wildlandfirersg.org/>

Week 6d - Utility Safety

Utilities such as Electricity, Water, Sewer and Natural Gas are all subject to the possibility of damage during and following a disaster. Care should be taken to avoid contact with damaged utilities and authorities should be notified as soon as possible. Downed power lines can also trigger fires and/or electrocution. Depending on the voltage, current can jump large distances and may in fact energize the ground it is in contact with. If downed wires encounter water, even stepping onto an energized wet surface can result in electrocution and death. It should be remembered that even household currents of 120 and 240 volts can kill and utility wires upstream of the transformer may be much higher.

Although risk associated with broken water and sewer lines is much different than gas or electricity, they can be deadly as well. The risk of additional flooding, engulfment and undermining of the ground and structures and sinkholes all can cause injury or death. Broken sewer lines pose a significant risk of contamination and other health risk.

With Natural Gas, suffocation, fire and explosion are the obvious risk. However, this risk is reduced by following certain guidelines. At any time, if you smell, hear or see a gas leak, call

911 to investigate. Natural Gas by itself does not have an odor. By law and for safety reasons, mercaptan, which smells like rotten eggs, is added. This smell is the most common way for people to sense a gas leak. You may also hear a hissing sound if there is a leak near or in a pipeline. Additionally, you may see an unusual cloud, blowing dirt or bubbling water. Typically, this will be in combination. If you discover or suspect a leak, back away immediately and do not use your phone or any device which may emit a spark. When you are at a safe distance, call 911, ask for both fire and the gas company to be dispatched and fully describe what you see, smell and hear. Do not attempt to shut off gas meter unless instructed to do so and it can be safely accomplished. If you do have to shut off the gas, make sure to use a not sparking type valve wrench. If gas is shut off it is illegal to turn it back on yourself.

Your gas meter and appliances

If water rises to the level of your gas meter or appliances, turn off your gas at the meter, if you feel you can do it safely. Follow the shut off instructions below. Do not enter a flooded area to shut off appliances. Avoid flooded areas to protect yourself against high voltage electricity that may be present. Gas appliances are made with safety systems designed to shut off the gas.

After the flood

After the waters recede, do not turn your meter back on if it has been turned off, and do not try to operate either a flooded meter or gas equipment. NW Natural will visit your home to reactivate your equipment and meter, if possible - and if your gas equipment has not been submerged. If you aren't home, a technician will leave a card on your door instructing you to call the customer service line upon your return.

Theme Seven: Understanding Man Made Risk

Natural disasters are not the only emergencies that can impact our families and require emergency response. Manmade disasters can range from accidental discharge of hazardous material, to deliberate acts of terrorism. For the month of March, Prepare in a

Year Texas will focus on these types of issues, their impact on Central Texas and what can be done to mitigate the risk. Each week, we will focus on a different type of manmade or human caused disaster and provide a few tips as to what we can do to be better prepared.

Week 7a - Hazardous Materials

Almost every day we face the possibility of facing exposure to some form of hazardous material. Driving down the road we sometimes notice the diamond shaped placard on the back of a truck, identifying the type of material the truck is carrying. While watching a train passing by, try to count the number of placards you see and contemplate what might happen if there was an accident? Even in our own homes, we have multiple items that we do not always think of as dangerous, but in reality, can be very hazardous material. Gaining a perception of how often we are potentially exposed is the first step to becoming prepared for these types of disaster.



For those who wish to learn about it, there are many different websites that are available that describe Hazardous Material Placards. Each placard contains information that can be used to identify the material contained (The number 1202 identifies the contents as Gasoline or Gasohol). The representation of a flame, lets you know it is flammable and the number 3 identifies which of the nine classes of hazardous material (3 signifies liquid). For more information on placards, including links to an app for your phone, go to www.phmsa.dot.gov

For some people, the threat of hazardous materials is not just transportation related, but can be from fixed sites. This not only includes large industrial facilities, but also locations that are common to find in almost every city. Auto body and Paint shops, dry cleaners, even gas stations can create some type of risk. As previously stated, just being aware of what could happen is the first step to being prepared.

With fixed or transportation based hazardous material incidents, there are some common things to remember. The first of course is that the safest place to be is as far away as possible, upwind, uphill and upstream. In the emergency management industry, there is a common called “The Rule of Thumb”. Although meant to be funny, it is true. The rule is if you hold your thumb out at arm’s reach and cannot block out the incident with your thumb, you are too close.

There is an important acronym to remember that was first developed about deliberate events, but fits with every hazardous material event. That acronym is RAIN, meaning Recognize, Avoid, Isolate and Notify. In recognizing that a hazardous material event has happened, there are certain steps you should take. Of course, you want to avoid getting any closer or increasing your exposure. You want to isolate the scene by stopping others from entering the area and if safely possible to do so, take steps to slow or prevent the spread of the material. Finally, the most important step of this process, notifying the proper authorities, providing them with as much information as possible. If you can see a placard, providing dispatchers with the number will help responders know what to be prepared for.

Week 7b – Health Issues – Pandemic and Bio Agents

This week, the discussion will center around the threats of infectious diseases and biological agents. Although we do not often think of Influenza as something we need to prepare for, the reality is, if we are prepared, we can greatly reduce our risk of exposure. This does not only mean maintaining good hygiene and getting the flu shot every year, but being aware when people are sick in your community and what the risk actually are.

Every year there are on average 36,000 deaths in related to influenza. Although typically thought of as a mild illness, every flu season can be different, impacting different age and demographic groups as well as having different intensity. Although this occurred prior to the health surveillance and vaccinations we have today, the 1918 Spanish Flu which began in the Midwestern United States resulted in the deaths of an estimated 50 million people worldwide and over 675,000 in the US alone.

An additional issue that should be considered is the fact that with any potential outbreak, fear, no matter realistic or not, can serve as a force multiplier of its impact. As was seen with the Ebola crisis of 2014 and 2015, misinformation and media driven hype can compound an event and cause it to appear far more of a danger. The problem is, too often communities ignore the possibility until it is driven by a crisis. The appropriate response is to take every threat seriously, but act out of precaution and not fear. Maintain good hygiene, avoid people who are sick and if you do become sick, by all means stay home and not share it with others.

In addition to the spread of infectious disease, there are certain biological agents that can also cause illness. Many people remember the 2001 Anthrax attacks that was a deliberate event, but these agents can also result from accidental exposure. Especially for those people who work in the agricultural, healthcare and sanitation industries, daily exposure to biological agents is not unrealistic. Understanding what Biologic Agents are and what the risk can be is the first step of preparedness.

A biological agent is a micro-organism, including parasites and spores, which may provoke infection, allergy or toxic reaction. Again, taking appropriate measures such as good hygiene, wearing appropriate personal protective equipment and maintaining good situational awareness of what is going on around you can greatly reduce risk.

Exposure to biological agents can also result as a cascading impact of other disasters. As an example, many of the homes that are impacted by flood water develop problems with mold. This can be more serious than just unsightly stains as mold can cause or exacerbate respiratory issues and even result in death.

As the next two weeks, will be discussions of both domestic and international terrorism, the topic of biological agents deliberately used to cause illness will be saved until then.

Week 7c – Terrorism part-one

Domestic Terrorism is defined as specific illegal actions committed inside the territorial borders of the United States, that are not under the direction or influence of foreign governments or organizations, that are designed to influence policy, coerce or intimidate a civilian population through fear. Although typically thought of as large scale or high visibility events such as the 1995 Bombing of the Murrah Office building in Oklahoma City or the Boston Marathon Bombing. Domestic Terrorism also includes less known acts such as the spraying of Salmonella on salad bars in the Dalles Oregon in 1984. What matters is that acts, often violent, are committed in furtherance of a cause or to cause a change in Government or governmental policy. The terrorist loose if the public fear and chaos is counteracted by citizens and government being prepared.

Terrorist typically choose targets to meet specific goals and are often intended to cause mass casualties, disrupt vital services or the economy, deplete critical resources and/or to instill a crippling fear in the populous. These targets may include seats or symbols of government, key industries, critical infrastructure and places of civic pride and /or historical significance. Although the likelihood is low that terrorist would attack Central Texas, prior to 1995, few people would have thought Oklahoma City was a high visibility target. The fact is we never know and it is important that everyone play an active role in keeping our region and nation safe.

Most people have heard the mantra “See something, Say something”. This is a program that has been promoted by the Department of Homeland Security and the FBI for many years. Although it seems simplistic, the concept remains the best way to prevent acts of terror from occurring. When people notice and report something out of place, it at minimum draws attention to something out of the ordinary. On May 1, 2010, street vendors in Times Square noticed a SUV parked near the curb, engine running, its blinkers on but no

one inside or near it. They brought it to the attention of police officers who then called in the Bomb Squad to dismantle a massive car bomb that would have killed thousands.

The Counterterrorism Education Learning Lab or the CELL produced an outstanding video outlining the eight warning signs that terrorist activity might be forthcoming. This video, can be viewed on You Tube or on their website www.thecell.org. These eight signs, typically exhibited by potential terrorist include:

1. Surveillance: The targeted area is watched and studied carefully. This may include recording or monitoring activities.
2. Elicitation: Information is gathered that is specific to the intended target. This may be by mail, phone, or in person.
3. Tests of security: Local security measures are tested and analyzed, including measuring reaction times to security breaches or attempts to penetrate security.
4. Funding: Raising, transferring, spending money, which may include selling drugs or stolen merchandise, funneling money through businesses or charities
5. Acquiring supplies: Necessary supplies are gathered to prepare the attack, including weapons and weapon components, transportation, and communications. Supplies may be purchased with cash only.
6. Impersonation or suspicious people who don't belong: People impersonating roles to gain access or information and people who don't fit in or don't seem to belong in the location
7. Rehearsals and dry runs: Groups or individuals will often operate test runs before the actual attack.
8. Deployment: The final and most urgent phase when terrorists are deploying assets and getting into position. Attack is imminent.

Recognition of these signs may be important in preventing an event. This does not mean every person should be weary of and report their neighbors, but when the action does not seem to fit right a second look may be appropriate. As the Department of Homeland Security states on their webpage – Homeland Security begins with Hometown Security.

Week 7d – Terrorism part two

Although there is no singular definition of terrorism, it could be defined as: “The calculated, nonmilitary use of violence (or the threat of violence) against civilians in order to attain goals that are political, religious or ideological. Although most people have the perception that we need to fear certain ethnic and religious groups, the fact remains that historically, the majority of events occurring inside the US have been performed by people that would not fit these stereotypes. As was seen by the Oklahoma City bombing, the Olympic games in Atlanta and by environmental terrorist who splinter out of groups like the Animal Liberation Front (ALF) or Earth Liberation Front (ELF), to focus only on certain religious or ethnic groups actually can place us at greater danger.

Terrorist attacks can come in many forms as well. They can attack physical locations or conduct cyber-attacks disrupting critical infrastructure or causing economic collapse. Although most people think of cyber-attacks as hacking into personal information on a computer, the reality is it can also include taking over control of supervisory and control systems for the power grid, power generation or other utilities. Although individuals have little control over these utilities, they can help reduce risk by being aware of the threat. To find out more about the Cybersecurity Awareness Campaign, go to <http://www.dhs.gov/stopthinkconnect>

For physical attacks, there are five primary possible weapons or methods that cause concern. The acronym CBRNE is often used to describe these five categories:

- Chemical
- Biological
- Radiological
- Nuclear
- Explosive

Chemical agents may include Toxic Industrial Chemicals, agents designed for military use and in some cases household items. They can be divided into five basic types: Nerve Agents, Blood Agents, Blister Agents, Chocking Agents and those used for Riot Control. As was previously discussed, some household chemicals may also fall into these categories. “Raid bug spray” as an example is a diluted nerve agent. Although we think of it for its use to kill insects, if inhaled or is allowed to remain on skin, it can result in serious health impacts.

Biological agents are those agents found in nature that have been weaponized to ease dissemination or concentrate risk to humans and animals. One of the greatest challenges of biological attacks is there are many routes of exposure and the presentation of symptoms may not occur for days to weeks following exposure. Consequently, many more people can be impacted before it is even recognized that an attack has occurred. In 1985, a group of followers of the Bhagwan Shree Rajneesh used salmonella that was sprayed on salad bars around the Dalles Oregon a few days before an election. They hoped to sicken voters in a county election so they would stay home, allowing their candidates to seize control of the local government. Although it did raise red flags when so many people became sick, it was thought to be naturally occurring for more than a year when the plans were uncovered by authorities as part of a criminal investigation.

When most people think of the threat of radiation they think of nuclear bombs. Although this may be some degree of threat in today’s world, a greater risk is what is known as a Radiation Dispersal Device or Dirty Bomb. This type of device is a conventional explosive that is designed to disperse or spread radioactive materials. This material may be

medical, University science labs or in some industrial waste including many items we do not give a second thought about. Often the intent of these types of attacks is not to kill, but to create paralyzing fear in those exposed.

Of the five methods of attack covered in the acronym CBRNE, Nuclear is by far the most difficult for terrorist to gain access to. Although the possibility does still exist with sometimes politically unstable national actors such as North Korea, Pakistan and Iran building nuclear capacity. However, due to the complexities of handling material and the complexities of creating and using a nuclear weapon, the use by terrorist is considered low.

Explosives, especially high yield types are the most common weapons used by terrorist. They are relatively easy to get, easy to hide and easy to use. They also can come in many forms including grenades, dynamite and improvised explosive devices. This threat may also include the combination of raw materials such as ammonium nitrate fertilizers and diesel fuel which was used to kill 168 people with the attack on the Alfred P Murrah building in Oklahoma City.

The primary reason why these methods of terrorist attack are included in Prepare in a Year Texas is to raise your perception of what could happen and what to look for. Unusual fog or mist forming, unscheduled spraying or finding abandoned spraying devices, unusual odors or taste, out of place packages or backpacks all may be indicators of a terrorist attack. As was discussed with Hazardous Materials, if you observe any of these indicators of a terrorist attack you should follow the acronym RAIN. **Recognize** what is going on, **Avoid** exposing yourself further, **Isolate** the area to keep others from exposing themselves and **Notify** appropriate authorities.

The Ready Campaign provides help with planning for businesses at
<http://www.ready.gov/business>.

“If You See Something, Say Something™”
<http://www.dhs.gov/see-something-say-something>

Theme Eight: Training

There are many great programs that have been used around this nation to promote emergency preparedness. Many of these programs encourage people to go beyond just collecting a few supplies and seek out specific training that might prove beneficial prior to, during or following a disaster. This month's focus for Prepare in a Year Texas will be on some of the free or low cost training available for citizens.

The idea is not to turn every person into a "Prepper" or an expert on disaster preparedness and response. However, disasters tend to bring out the good in people as they want to help their families, their neighbors and their community. The advantage of training is that it helps teach how to prepare and respond safely, effectively and as an asset to your community and not just a self-deploying resource.

For the purposes of Prepare in a Year Texas, this training will be divided into four separate categories. The first will be training that is available online. The second week will focus on local training that may be available. The third week will be a discussion of the CERT or Community Emergency Response Team program. The final week will be on creation of more localized teams in what is known as the neighborhood emergency team concept.

Week 8a – Online Training/ Independent Study

In the program three days/ three ways, citizens were urged to prepare for being on their own for a minimum of three days and to prepare in three ways; build a kit, write a family disaster action plan and to seek out appropriate training. The month of April will focus on some of the training programs that are available to citizens.

There are a wide variety of online training programs that are open for citizens working to build a greater understanding of disasters and disaster preparedness. FEMA's Emergency Management Institute located at the National Emergency Preparedness Training Center has a number of online independent study programs that would prove valuable for citizens to take. These programs are self-paced, often interactive and best of all, free for the General Public to take. These classes range from easy to use, entry level type preparedness courses to those more advanced programs focusing on specific areas of study or disciplines. If for no other reason to gain a better understanding of the current trends and scope of

emergency preparedness, spending a few minutes looking through various courses can be interesting. A list of classes and more information on these online programs can be found at <https://training.fema.gov/is/>. An additional benefit is that with the successful passing of each class, a frameable certificate is electronically provided that you can then print out. Many of these classes also qualify for continuing education credits in some professions.

A good class for everyone to take that provides a great overview of what individual citizens can do is IS-909: Community Preparedness: Implementing Simple Activities for Everyone. This class not only talks about preparedness, but identifies activities individuals, families and business can take to add to our national and community preparedness. This course can be accessed through the above link or by going to (<https://training.fema.gov/is/courseoverview.aspx?code=IS-909>).

Another great link for individual preparedness is a former IS class now found on the Ready.gov website. The former IS-22: Are You Ready is one of the reference guides used to create this Prepare in a Year Texas program. The link to this program can be found at <https://www.ready.gov/are-you-ready-guide>

Week 8b – Private, American Red Cross, Local EMA Training

In addition to online programs, many local government and non-governmental organizations offer classroom delivered programs. For some classes, such as the American Red Cross's First Aid/ CPR class, a nominal fee may be charged to offset cost; however, some are provided in partnership to meet community needs. As an example, in many locations, the American Red Cross offers a class to train new volunteers to work in emergency shelters and shelter management.

The American Red Cross has long been a proponent of preparedness training. The Red Cross has partnered with FEMA for years to develop preparedness programs and to distribute literature and information to the general public on how to prepare for all forms of natural hazards. In the aftermath of the September 11 terrorist attacks, the American Red Cross was one of the first organizations to develop and distribute a guide for homeland security preparedness for individuals, businesses and families and to this day continues to be a valuable partner in community preparedness.

The American Red Cross of Central and South Texas can be reached at <http://www.redcross.org/local/texas/central-and-south-texas>

Also, Local emergency management departments will often offer classes open to citizens. Next Week's message will include a discussion of the national CERT or Community

Emergency Response Team training as well as the Map Your Neighborhood (MYN) program that is being developed in some parts of the nation. Your local department of emergency management can provide more information on these programs.

Week 8c – CERT / MYN

In addition to local training focused at building individual preparedness, there are nationally known programs that focus in organizing and training volunteers to work in teams that assist directly in the community. This week, *Prepare in a Year Texas* will focus on two of those programs; Community Emergency Response Teams or CERT and Map Your Neighborhood or MYN.

Community Emergency Response Team (CERT) concept was developed and implemented by the Los Angeles City Fire Department (LAFD) in 1985. The CERT course will benefit any citizen who takes it. This individual will be better prepared to respond to and cope with the aftermath of a disaster. Additionally, if a community wants to supplement its response capability after a disaster, civilians can be recruited and trained as neighborhood, business, and government teams that, in essence, will be auxiliary responders. These groups can provide immediate assistance to victims in their area, organize spontaneous volunteers who have not had the training, and collect disaster intelligence that will assist professional responders with prioritization and allocation of resources following a disaster. Since 1993 when this training was made available nationally by FEMA, communities in all 50 States, the District of Columbia, Puerto Rico, Guam and the Virgin Islands have conducted CERT training.

CERT is a 27+ hour training program that is taught in 3 hour modules over a course of weeks or on occasion is taught in eight hour modules over weekends. In addition to the classroom training, CERT builds skills through hands on practice and exercise. Prior to graduation, participants will often participate in a full scale exercise in a realistic setting that includes actors with moulage simulating injuries.



CERT consist of nine modules that are consistent yet can be tailored to fit local needs. Each organization delivering the course are required to cover basic material; however, the focus can be steered to make it more appropriate to regional needs and practices. In many locations, CERT volunteers are credentialed by the local emergency management organization who also provides assistance in developing neighborhood teams.

The nine CERT course units are:

1. Unit 1: Disaster Preparedness
2. Unit 2: Fire Safety
3. Unit 3: Disaster Medical Operations—Part 1
4. Unit 4: Disaster Medical Operations—Part 2
5. Unit 5: Light Search and Rescue Operations
6. Unit 6: CERT Organization
7. Unit 7: Disaster Psychology
8. Unit 8: Terrorism and CERT
9. Unit 9: Course Review and Disaster Simulation

There is also an excellent CERT Overview course available online at <https://training.fema.gov/is/courseoverview.aspx?code=IS-317>

For more information, go to <https://www.fema.gov/community-emergency-response-teams>

Map Your Neighborhood or MYN is slowly being rolled out nationally but was developed from the neighborhood emergency teams' concept in Pierce and South King County areas of Washington State. In this program, individual blocks are organized not only by skill and training, but by who will assist with what function. Additionally, the program helps in identifying specific needs and threats to a neighborhood and to identify which neighbors may have specific needs.

Using this concept, a meeting would be held in the neighborhood of 10-20 homes. The overall concept would be discussed with information developed shared between each participant. The people who could assist with search and rescue, extinguishing fires or medical might be identified and the local daycare might be identified by the NET or Neighborhood Emergency Team as the place all the children could be sent to for care. It does not work in all cases, but it is a unique program that could be adapted in some of the higher density neighborhoods.

For more information, go to:

<http://mil.wa.gov/emergency-management-division/preparedness/map-your-neighborhood>

Week 8d – Advanced

The Federal Emergency Management Agency (FEMA), along with the National Domestic Preparedness Consortium (ndpc.us) are the leaders in developing and teaching courses in emergency management. FEMA manages the Emergency Management Institute (EMI) and the National Fire Academy (NFA) that are collocated on a former college campus in Emmitsburg, Maryland. The NDPC consist of seven programs, all dedicated to the training of first responders, government leaders and hospital personnel in particular facets of emergency management. Additionally, FEMA and the International Association of Emergency Managers (IAEM) has helped establish degree programs in junior colleges, colleges and universities across the country.

Thousands of firefighters, fire officers and emergency managers have been trained by EMI and NDPC programs. Although not all of these programs are appropriate for civilian volunteers, those who demonstrate appropriate leadership skills and dedication have been known to attend. The purpose of including this discussion in the Prepare in a Year program is to inform everyone how seriously emergency preparedness is taken in this nation. Contact your local emergency management officials to see how you might be able to qualify. (NOTE: Not all Emergency Management Programs use volunteers – Please do not pester those who do not, think of partnering agencies such as the American Red Cross.)

Theme Nine: The Disaster Cycle

Week 9a - Understanding The Five Phases of Emergency Management

When most people think of disasters, they think primarily of the event itself and not as a continuous process or cycle of preparing for, responding to and recovering from all hazards. According to Presidential Preparedness Directive #8, there are five distinct phases of emergency management as listed below.

The Five Phases of Emergency Management

Prevention focuses on preventing human hazards, primarily from potential natural disasters or terrorist (both physical and biological) attacks. Preventive measures are designed to provide more permanent protection from disasters; however, not all disasters can be prevented. The risk of loss of life and injury can be limited with good evacuation plans, environmental planning and design standards.

Preparedness is a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action. Training and exercising plans is the cornerstone of preparedness which focuses on readiness to respond to all-hazards incidents and emergencies.

Response is comprised of the coordination and management of resources (including personnel, equipment, and supplies) utilizing the Incident Command System in an all-hazards approach; and measures taken for life/property/environmental safety. The response phase is a reaction to the occurrence of a catastrophic disaster or emergency.

Recovery consists of those activities that continue beyond the emergency period to restore critical community functions and begin to manage stabilization efforts. The recovery phase begins immediately after the threat to human life has subsided. The goal of the recovery phase is to bring the affected area back to some degree of normalcy.

Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters and emergencies. Mitigation involves structural and non-structural measures taken to limit the impact of disasters and emergencies. Structural mitigation actions change the characteristics of buildings or the environment; examples include flood control projects, raising building elevations, and clearing areas around structures. Non-structural mitigation most often entails adopting or changing building codes.

For more information on this go to <https://www.bexar.org/694/Five-Phases>

Additionally, there is a process that governments follow in a disaster response. That will be the topic of next week's Prepare in a Year Texas

Week 9b - Understanding how the process works

It has been said that "All Disasters Are Local". As local responders and citizens are the first on the scene and will still be there long after the incident is presumed over, it is a very valid statement. However, between the onset of a disaster and its final closeout there is a specific process that is outlined in Federal and State law that governs how a disaster is handled over the long term. That is the topic of this week's Prepare in a Year Texas.

Although it can be somewhat confusing and frustrating, not every disaster is treated the same way. Although to a survivor of a devastating flood that lost everything they own, their experience feels like it is on par with Hurricane Katrina, if only a few homes are impacted it will most likely not rise to the level of a Presidential Disaster Declaration. What is important is to recognize there is a specific process that is followed, that includes specific thresholds be met. Certain actions are required at each step to not only demonstrate due diligence, but also demonstrate accountability and transparency in the disposition of federal relief funds.

When a disaster overwhelms a local jurisdiction, they can request assistance from other local governments and from the State. The designated official, typically the Mayor or County Judge makes a formal request to the Governor. When the disaster overwhelms the State's ability to respond, the Governor can make a request to the President, through the FEMA Regional Director.

This entire process is outlined and governed by what is known as the Robert T Stafford Act (PL 100-707) Two thresholds must be met under the Stafford Act, a state threshold and a county threshold. These thresholds are based on a pre-determined legal formula that disaster damages must exceed. The formula uses population of the jurisdiction as determined in the last official U.S. Census which is then entered to multiply population by \$3.50 per capita for counties and \$1.39 per capita for the state. Many times when a disaster seems significant and never reaches the level of a Presidentially Declared Disaster it is because it never reached these thresholds.

<https://www.fema.gov/disaster-declaration-process>

It should also be noted that governments and first responders have a system used in the initial response to events. Often this includes what is known as a Windshield Survey where they drive around the area to gain situational awareness on the scope of the damage. Remember, they are responsible for the safety of everyone and it is important that they know the extent of the damage and if cascading events might take place. This windshield survey allows them to do this. Just because they drive by your location, does not mean they are ignoring you. They may in fact be directing other responders right behind them.

Week 9c - Building Capacity

Just as this program has stressed how important it is for individuals and families to develop and build the capacity to respond to and recover from disaster, it is incumbent upon communities to do the same. Capacity building allows local governments, organizations and communities to enhance and develop the resources that will allow them to achieve measurable and sustainable results. This may be through training programs, this may be through acquisition of other resources. The important thing is individuals, communities and governments recognize the importance of building capacity.

The term capacity building refers to strengthening the skills, competencies and abilities of people and communities to achieve a certain goal. In this case that goal is to safely respond to a disaster, protect the lives and interest of our families and as quickly as possible begin the recovery process. The more work we put in to preparedness and planning often determines how successful our response and recovery will be. So capacity building includes our preparedness and planning. However, I believe it goes beyond that as well.

Capacity building is also a change in our perception about disaster. Instead of focusing on how disaster might negatively impact us, we instead focus on how our efforts overcome those impacts. It is like the scrawny person who was the victim of a schoolyard bully deciding to work out, take up martial arts and change the outcome next time that bully comes along. Preparing for disaster is not just gathering resources needed to survive a disaster, it is learning how to overcome it.

There are other benefits of this capacity building as well. As terrorists look to create fear and disruption in order to further their goals, if individuals and communities have the capacity to respond to and recover quickly then their attractiveness as a target is diminished. This resilience, or ability to bounce back is what they fear as it neutralizes their attempt.

Week 9d - Carrying it Forward

Now that you and your family are well on your way to building capacity to respond to and recover from disaster, you might ask what is next. Reaching beyond yourself and looking how you can share your excitement with others may be part of that answer. Volunteering, teaching, or just encouraging your neighbor to take some of the same simple steps you have taken may be your way of carrying the positive message of preparedness forward.

Preparedness is everyone's job. Not just government agencies but all sectors of society-- service providers, businesses, civic and volunteer groups, industry associations and neighborhood associations, as well as every individual citizen--should plan ahead for

disaster. According to FEMA, there are four basic steps that individuals should take to become better prepared:

- Step 1. Find out what types of disasters are most likely to occur in your community and how to prepare for them. Contacting your local emergency management office or American Red Cross chapter for information and guidelines is a good way to get started.
- Step 2. Create a family Disaster Plan. Hold a family meeting to talk about the steps they'll take to be ready when disaster happens in their community.
- Step 3. Take action. Each family member, regardless of age, can be responsible for helping the family be prepared. Activities can include posting emergency telephone numbers, installing smoke detectors, determining escape routes, assembling disaster supply kits and taking first aid or CPR courses.
- Step 4. Practice and maintain the plan. The final step emphasizes the need to practice the plan on a regular basis so family members will remember what to do when disaster strikes.

Now if you have been following Prepare in a Year Texas since the beginning, most, if not all of these steps have been taken. However, it may be easier to introduce the concept to others by simplifying the process. Then, after they gain a perception of the importance of preparedness, you can introduce them to the entire Prepare in a Year Process.

Theme Ten: Volunteer

As the costs of disasters and preparedness continue to rise, even in the face of tax cuts and reductions in public safety budgets, many communities have turned to their greatest resource, their citizens. This month, *Prepare in a Year Texas* will focus on the role of volunteers in disaster and how they can be used to leverage other critical resources.

Week 10a - Local EMA

As mentioned last month, not all emergency management agencies use volunteers. This is not always out of a reluctance to use them, sometimes it is because of the supervision and commitment it sometimes takes to manage volunteers. In most cases, the local EMA is looking for those people who have already shown a commitment to the process, either as a member of a local CERT team or who have shown exceptional leadership during a disaster. It is not uncommon for volunteers to need to fill out a formal application and commit to regular training.

One area where volunteers are often used is managing other volunteers, especially spontaneous ones. When a disaster occurs, it is common for many people to seemingly come

out of the woodwork, wanting the help. This in itself can be a disaster if there is no one to manage them. People who attend trainings, learn how to manage volunteer workers and most importantly learn how to properly maintain records and documents of these volunteers can prove invaluable. As volunteer hours are often tracked as part of the local match to disaster recovery funding, the hours you officially volunteer to assist your neighbors can carry the weight of extra dollars to be used in the recovery.

Week 10b - Voluntary Organizations Active in Disaster

Voluntary Organizations Active in Disaster or VOAD's are a public-private partnership where non-profit and faith-based organizations work together in conjunction with local, state, and federal organizations in response to disasters. VOADs can be local like BR3T, but the 49-member NVOAD or National VOAD consist of organizations like many of the great organization that have traveled across this nation to help rebuild central Texas after the devastation of the 2015 floods.

Your involvement in local public-private partnerships is a visual demonstration of your commitment to your community and its issues. No matter if you chose to remain local or you choose to join with teams traveling from disaster to disaster, there are plenty of opportunities. Many people believe this is the way of the future in both short-term and long term recovery.

In this day and age of budget cuts and tightened fiscal belts, VOAD's may truly be the best method to provide needed resources to the communities that are affected by disasters. It also allows governments to then return to their normal functions of governance.

Week 10c – Federal and Disaster Assistance Workers

Although it sometimes seems to change every year, the Federal Government will other use temporary, reserve or local hires to assist in the disaster recovery process. This is often hard work and for relatively little pay and benefits; however, it is another way to make a positive impact in the community. For youth, they might consider looking into FEMA Corps, who can be dispatched to disaster areas across this nation to assist in the immediate response and recovery efforts. Links to all of these programs are listed below.

<https://careers.fema.gov/temporary-local-hires#>
<https://careers.fema.gov/reservists-intermittent>
<https://www.fema.gov/reservist-program>
<https://careers.fema.gov/fema-corps>

Week 10d - Long Term Recovery

Following the end of a disaster response you will see an ongoing recovery phase that is designed to take care of immediate needs such as power, water and sanitation. The priorities are to restore some sense of normalcy by clearing streets, getting business back up and running and most people allowed to return home. However, this does not mean that everyone can return to their pre-disaster life.

Sometime after the last television news crew signs off from doing live remotes, the real work on long term recovery begins. No matter how well prepared a community is, there will always be those who fall through the cracks. They may have a little bit of money from FEMA or insurance but the cost of repairs is 10 times the amount they can gather up. This is where Long Term Recovery Organizations or LTRO's come into play. An LTRO is an organization whose function is to facilitate the repair of damaged homes that might otherwise not get done. LTRO's work with community, faith based and philanthropic organizations to bring together the resources to get these homes repaired, rebuilt or in some cases replaced. They may partner with VOAD's to provide labor; however, it is not uncommon for at least some labor to be contracted. Either way, LTRO's are always looking for good people to step up and serve their community.

From assisting with the management of volunteers to, staffing committees, to basic office work there is almost always someplace your assistance can be used. As most often these organizations are 501(c)(3) non-profit organizations, the more they can do with volunteer labor, the higher percentage that donations go directly to assist those they serve. Blanco River Regional Recovery Team is the designated LTRO for Blanco, Hays, Caldwell and Guadalupe Counties in dealing with the two 2015 floods. It is BR3T's hope that this will be a sustainable organization that will be ready when the next disaster hits.

Theme Eleven: Exercising the Plan

Having a family disaster action plan and emergency supplies is a large part of preparedness; however, even the best plan is worth little, if family members do not know how to use it. Just as many of us grew up doing fire alarm drills in elementary school, families should sit down and discuss plans as well as conduct an occasional exercise. This will be the topic of this month's Prepare in a Year Texas.

Week 11a - Family Discussion

Disaster exercises come in many different formats, from simple discussions to actually simulating a disaster. For this week we will limit the topic to simple discussions with family members and how to present the concept of disaster preparedness without raising alarm bells and unreasonable fears. Especially in children, the concept of disasters is something that completely upsets their entire support system. As children process live events differently, having age appropriate discussions prior to disaster can dramatically reduce fears

It was once said that the difference between disaster and adventure is preparedness. If you and your family are properly prepared, disasters may still be an inconvenience, but in some ways they can be an adventure. You are testing your skills against those of mother nature or the impacts a human caused event. By presenting preparedness as an opportunity to be ready to act rather than something that must be done to survive, the concept of preparedness becomes less burdensome.

Talk about the type of disasters that could happen and how the family disaster action plan was written to help everyone better know what needs to be done. By keeping things positive, preparedness begins to become second nature, thus when disasters do occur, all family members have a greater perception of what to do.

Week 11b – Drills and Discussion Based Exercise

Disaster exercises can be divided into two basic concepts: discussion based exercises such as Table Tops and workshops (family talks), and operational based exercises such as drills, functional and full scale exercise. This week, we will focus on discussion based exercises. Just as the discussions in last week's message were meant to spur familiarity with the plan, a table top is to gain familiarity with what responses should look like. Local and regional governments and responders use this format quite often to work through their plans. There is no reason why the same concept cannot be used by individual families.

With a Table Top exercise, a specific scenario is used to verbally simulate a disaster and participants then discuss how to respond. For scenarios, it is possible to use real life events occurring in other communities or a fictional event written out specifically for this purpose. Some of these scenarios can be found online at websites such as <https://www.fema.gov/emergency-planning-exercises>

The concept is to sit around a table, lay out the scenario and then each participant discuss what they should be doing in response. It may sound easy and superficial, but discussions often reveal areas that may not have been thought of in the planning stage or areas that need to be added to the plan. After each exercise, a short meeting or hotwash should be held to discuss what went right, what went wrong and how the plan can be made better. It is important to remember that there is no wrong action, unless it is something that no one learns from. It is far better to learn from mistakes during a simulation than it is during a real event.

Although this video was aimed at local governments and larger organizations, the basic concept can be seen in <https://www.youtube.com/watch?v=J5GwKru1Z0g> . Remember family exercises do not need to be as formal, but it does help understand the concept.

Week 11c – Operational Based Exercise

Unlike the discussion based exercises discussed last week, operational based exercise requires action as well as discussion. This may be a drill to test how quickly each family member can grab their go kit and meet up at a designated spot. Or it may be a more functional exercise where multiple aspects of the family plan are exercised. This may start as the drill mentioned above, but instead of everyone knowing where to meet up, each family member must call into the out of town contact and find where to meet back up. Make sure if you do this, to let the out of town contact know it is just a drill.

Operational based exercises can be in the form of:

- Drills – for testing a single aspect or component of a plan such as evacuation or a fire drill.
- Functional – Testing multiple events and simulated actions; however, no physical set up of equipment or deployment of resources occurs.
- Full Scale – Testing of multiple events or aspects of a plan, but including physical deployment of resources and simulated real time actions.

Also like was mentioned in discussion based exercises, local and regional governments as well as organizations such as schools and hospitals participate in operations based exercises. Below are a few links to some pretty good YouTube Videos on the topic. Note – both of these videos are for Full Scale exercises.

https://www.youtube.com/watch?v=kWMcg-__4dY (mock disaster full scale exercise at a school)

<https://www.youtube.com/watch?v=bJ16PGHIYRo> (Hospital full scale exercise on Ebola response)

Week 11d - Neighborhood exercises

Disasters do not typically impact just a single household. It is likely that when a disaster impacts your family, it will also impact others in your neighborhood. Accordingly, it might be wise to talk to your neighbors about conducting neighborhood exercises.

Theme Twelve: Revising the Plan

12a - Lessons Learned

No plan will ever be complete and no disaster will ever go 100% as planned. In fact, even 75% could be considered remarkable with the large number of variables that can

happen. Additionally, the planning assumptions we make can change very rapidly. As such we always want to revise and improve our planning and level of preparedness. This does not mean everyone should become a “Prepper”; however, it does mean that thinking about preparedness should be second nature.

One of the ways we can look to improve our planning is by looking for the lessons learned. After every event or exercise, if you sit down you will find a number of lessons that can be learned from your experience. If we take these lessons and convert them into improvements to our planning, then it is more likely we will be ready to face those same challenges.

One of the ways to identify lessons learned is to sit down after an event, discuss and analyze what happened, what went well, and what needs to be improved. If following an evacuation from a flood that it took too much time to gather items before evacuating, then possible solutions could be storing items in a more accessible location or possibly prepacking the car with some of the items during the warning phase. These possible solutions are lessons learned.

Week 12b - Our Changing World

Like it or not we live in a world that is constantly changing. Every day we see evidence of change with growth in our communities or new buildings and developments being built. With these changes come changes in the potential impacts of a disaster. As an example, we may know that historically, more than 2” of rain over a 6-hour period would be required for a road to flood. This is what is known as a planning assumption. However, because of a new housing development, the increased impervious surface has now increased runoff. That new development may now cause the road to flood with 1 ½” of rain. This is an example of where we might need to amend our planning assumptions. Additionally, there are sometimes changes in our own lives. A new child, or pets or other changes that should be addressed. Our lives do not remain static; our plans should not do so either.

For the past decade or longer, politicians and political pundits have argued over the existence of Global Climate Change and its possible causes. Some have argued it is a direct result of man’s carbon footprint on this Earth. Others have argued that it is part of a natural cycle and man can do little or nothing to stop it. What is often overlooked is that regardless of the cause, change is occurring. The weather in Texas is a result of multiple changes in microclimates in the Gulf, in the Pacific and in prevailing winds. Many experts believe that this may result in more intense systems impacting our region. As the land around the Balcones Escarpment is already the highest flash flood risk in the nation, how would more intense weather patterns impact our planning assumptions?

The idea of amending our planning assumption based on what is changing in our world should be a simple choice. We already, either consciously or subconsciously, amend our plans or make course adjustments in our daily lives based on little changes we recognize. To need to extend this to our Family Disaster Action Plans should be self-explanatory. It

also helps us recognize that preparedness is not just a single action, but a mindset we should all gain.

Week 12c - Making Updates / The Preparedness Cycle

As was mentioned last week, preparing for disasters is an ongoing process or cycle that has no end. This process begins with planning and then taking action to prepare (training, building a kit etc.). This plan is then tested in an exercise or in an actual disaster followed by looking for lessons learned. Our plans are then revised based on these lessons learned, and a re-assessment of our planning assumptions. We take action to prepare based on this revised plan and then it is ready to be tested again. It should be a continuous loop that keeps the plan fresh and up to date.

Week 12d - Carrying It Forward

This is the final chapter of Prepare in a Year Texas. We have covered twelve themes, each with four messages on that theme. Now it is up to you to decide what you want to do with this new found knowledge. Hopefully, you were inspired over this past year to write a plan, build a kit and seek out training. Hopefully, you have talked to your family and even had an exercise or two. Hopefully, you have talked to your neighbors and looked to see how you can contribute to the community. Now you have to decide how you want to carry this message forward.

Appendix One: Types of Disaster

Flooding, riverine, shallow and urban

Because of both geological and geographical reasons, many parts of Central Texas have the highest risk of flash flood in the United States. A major geologic feature of Central Texas is the Balcones Escarpment which runs from approximately Del Rio north to approximately Waco. On the western side of this ancient fault line, Limestone is the dominant feature of the subsurface. On the eastern side the dominant subsurface feature is Caliche. Both are dense materials that do not readily absorb or hold water. When combined with intense rainfall, flash flooding can be expected.

Those households near rivers, streambeds or drainage channels should be aware of natural routes water will take. These households should be aware of and take advantage of public warning programs, websites and phone apps.

Those households near low water crossings should be aware of what routes may be blocked and have alternatives already in place in case as storm blocks your pathway. **UNDER NO CIRCUMSTANCES** should anyone try to cross a flooded crossing. It should also be noted that going around road closed signs is against the law.

Urban flooding typically occurs when storm drains are blocked or exceed capacity. Whenever possible, make sure leaves and other debris that could block or deter drainage is removed. If a home is susceptible to urban flooding, steps such as berming can be taken to reduce risk. The County or City engineer should be consulted prior to any work of this nature.

Know the Terms

Familiarize yourself with these terms to help identify a flood hazard:

- **Flood Watch** - Flooding is possible. Tune in to NOAA Weather Radio, commercial radio, or television for information.
- **Flash Flood Watch** - Flash flooding is possible. Be prepared to move to higher ground; listen to NOAA Weather Radio, commercial radio, or television for information.
- **Flood Warning** - Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.
- **Flash Flood Warning** - A flash flood is occurring; seek higher ground on foot immediately.

Extreme and Severe Weather, Thunderstorms, Hail, Tornadoes

During the course of the year, Central Texas is subject to periodic patterns that can result in thunderstorms, intense rainfall, hail and possibly tornadoes. As such every household should have access to National Weather Service warnings available through weather radios, phone apps and

certain other public warning systems. Although there might not be much that can be done to prevent these types of events, gaining and maintaining situational awareness is an essential first step.

Severe Thunderstorms

For severe thunderstorms, it is highly recommended that if possible everyone goes inside and not seek shelter under natural lightning rods such as trees or on hilltops. Those seeking shelter should avoid open fields, isolated buildings or anything metal such as tractors, farm equipment, motorcycles, golf carts, golf clubs, and bicycles. It is also a good idea to familiarize yourself with these terms to help identify a thunderstorm hazard:

Severe Thunderstorm Watch - Tells you when and where severe thunderstorms are likely to occur. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio, or television for information.

Severe Thunderstorm Warning - Issued when severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property to those in the path of the storm.

| If you are: | Then: |
|--|--|
| In a forest | Seek shelter in a low area under a thick growth of small trees. |
| In an open area | Go to a low place such as a ravine or valley. Be alert for flash floods. |
| On open water | Get to land and find shelter immediately. |
| Anywhere you feel your hair stand on end (which indicates that lightning is about to strike) | Squat low to the ground on the balls of your feet. Place your hands over your ears and your head between your knees. Make yourself the smallest target possible and minimize your contact with the ground. DO NOT lie flat on the ground. |

The following are important facts about thunderstorms:

- They may occur singly, in clusters, or in lines.
- Some of the most severe occur when a single thunderstorm affects one location for an extended time.

- Thunderstorms typically produce heavy rain for a brief period, anywhere from 30 minutes to an hour.
- Warm, humid conditions are highly favorable for thunderstorm development.
- About 10 percent of thunderstorms are classified as severe—one that produces hail at least three-quarters of an inch in diameter, has winds of 58 miles per hour or higher, or produces a tornado.

The following are important facts about lightning:

- Lightning’s unpredictability increases the risk to individuals and property.
- Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.
- “Heat lightning” is actually lightning from a thunderstorm too far away for thunder to be heard. However, the storm may be moving in your direction!
- Most lightning deaths and injuries occur when people are caught outdoors in the summer months during the afternoon and evening.
- Your chances of being struck by lightning are estimated to be 1 in 600,000, but could be reduced even further by following safety precautions.
- Lightning strike victims carry no electrical charge and should be attended to immediately.

When Thunder Roars – Go Indoors

Tornadoes:

Seeking shelter from tornadoes, if inside a structure other than a mobile home or vehicle and no storm shelter is available, go to an inside room or hallway on a lowest floor possible. Huddle or lay on the floor, turning away from any windows, hallways, and outside walls. If possible, seek shelter in a closet or under a table or something sturdy.

If in a mobile home or in a vehicle, get out immediately and try to seek shelter indoors. If no shelter is possible, try to lay as flat as possible in a drainage ditch or other depression. Protect your head

with your arms as much as possible from flying debris. Tornadoes can be fast moving hazards that kick up a lot of debris that can be flying through the air. By lying low in a ditch you reduce the risk of being hit by this debris.

DO NOT SEEK SHELTER UNDER AN OVERPASS OR BRIDGE.

Familiarize yourself with these terms to help identify a tornado hazard:

- **Tornado Watch:** Tornadoes are possible. Remain alert for approaching storms. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio, or television for information.
- **Tornado Warning:** A tornado has been sighted or indicated by weather radar. Take shelter immediately.

Hurricanes / Tropical Storms:

Although the BR3T service area is many miles inland, this region can still be impacted by Hurricanes and Tropical Storms. As a result of these storms, high winds and heavy precipitation can still be expected. Although it is more likely to see impacts of storms hitting the Gulf Coast and tracking across or near the areas, Central Texas may also experience the impacts of Pacific storms. It is believed by some that the All Saints flood event in October 2015 was at minimum fed by remnants of Hurricane Patricia.

To prepare for a hurricane in the BR3T area, you should take the following measures:

- Be sure trees and shrubs around your home are well trimmed.
- Clear loose and clogged rain gutters and downspouts.
- Listen to the radio or TV for information.
- Secure your home, close storm shutters, and secure outdoor objects or bring them indoors.
- Avoid using the phone, except for serious emergencies.
- Ensure a supply of water for sanitary purposes such as cleaning and flushing toilets. Fill the bathtub and other large containers with water.

Extreme Temperatures, both Heat and Cold

Central Texas is subject to temperatures that can create specific dangers to an individual or family. Being aware of the impacts of temperature extremes can help families avoid health and other problems that can occur during prolonged events.

The human body is an amazing thing that for the most part can regulate internal temperature inside a range around 98.6 degrees. However, in cases of extreme cold or heat, the body may not be able to effectively control these natural defenses. In cases of extreme cold, blood and heat is prioritized to the

body's core. In extreme cases this may result in frostbite or other damage to body extremities such as fingers and toes.

[Heat Exhaustion](#) typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to decrease to the vital organs. This results in a form of mild shock. If not treated, the victim's condition will worsen. Body temperature will keep rising and the victim may suffer heat stroke.

[Heat Stroke](#) is a life-threatening condition where the victim's temperature control system stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.

Brush / Wildfire

Brush and wildfire is a real concern during prolonged periods of drought and/or high temperatures. Wildfire can occur as the result of accidental or intentional actions by mankind or by natural processes. No matter what the cause wildfire can destroy agriculture, homes and even take lives. Wildfire danger typically increases during times of low humidity when grass, trees and other ignitable materials become tender dry and are exposed to ignition sources.

Although with training, there are some steps that individuals can take to fight a wildfire, this should only be done in conjunction with and coordinated with local fire officials. However, steps can be taken around the home to reduce the possibility of fire spreading to structures. Cleaning of flammable debris from around a home, keep lawns trimmed, leaves raked, and the roof and rain gutters free from debris such as dead limbs and leaves. Firewood should be stored at least 30 feet away from your residence, building a fire break around a property and using nonflammable building materials for roofing and other building surfaces will further reduce risk.

Drought

Drought is officially described as an unusually prolonged period of time with little or no precipitation resulting in arid conditions and / or water shortages. When combined with increased temperature, drought conditions may be exacerbated by increased water consumption and evaporation. It is possible that in severe drought conditions certain water restrictions may be imposed including the possibility of water rationing.

There are measures that can assist individuals and households in dealing with the impacts or prospects of drought conditions. Among these provisions are planting drought resistant landscaping, installation of low flow or water saving devices and collection tools such as rain barrels and cisterns.

Whenever possible, repurpose water rather than pouring it down the drain. As an example, bathwater can be used to flush toilets. Even small changes in water use can make a big difference in drought impact.

Public Health Emergencies

As was seen in the 2009 H1N1 and the 2013 Ebola event, biological events such as infectious disease and pathogenic outbreaks can have significant impact on individuals and households. These events not only can cause significant health threats, but response measures may indirectly impact normal activities. It is possible that in the event of some events, social distancing or other isolation measures may be implemented. As such, it is important that household disaster planning include what to do during public health emergencies.

Hazardous Material Spill

One of the hazards of living in a more technological and industrial age is the increase in the possibility of hazardous material spills and accidents. These could be the result of fixed point events or as the result of transportation accidents. They could also be the cascading impact of a natural disaster or criminal activity such as illegal drug manufacture. Part of any emergency preparedness should include recognizing the potential for such events in your community and recognizing what is an appropriate response.

The appropriate response for a hazardous material event is to follow the acronym RAIN or Recognize, Avoid, Isolate and Notify. There are many ways a person might recognize the possibility of a hazardous materials event such as colored smoke or vapors, an acrid odor or strange liquid leaking from a container. When a person spots anything that could be a possible event they should maintain a safe distance, move upwind, uphill and upstream from the event and take steps to keep others away. As quickly as possible notify emergency responders and provide them with as many details as can safely be provided.

If placards or other hazard signs are visible, provide 911 with the UN number and other information contained on the signs. UN numbers are the 4 digit numbers on hazardous material labels that describe the contents. This number can help responders identify the contents, recognize the potential risk including toxicity, flammability, explosive risk and reactivity threat. The 911 dispatcher may not only refer this critical information to responders while in route, but they may also provide you with further instructions to increase your distance from the event. A long standing adage in haz-mat events is known as the Rule of Thumb. If you can hold your thumb out as arm's length and still see any part of the event, then you are too close.

If the event occurs while you are indoors, unless otherwise instructed, stay inside, close all window and doors and shut off outside air units. Unless there are other risk or hazards that may require immediate evacuation, sheltering in place is preferable to possibly exposing you to hazardous vapors or gases. Even in areas where you may not be immediately downwind, winds can shift while you are trying to self-evacuate. It is safer to wait for responders to assist in evacuating to a safe area.

Appendix One D: Family Disaster Emergency Action Plan Quick Checklist

Emergency Contacts:

It is important to have important numbers written down as well as programmed into cellphones. In case a cellphone is broken or lost, having these numbers available will at minimum relieve a lot of stress. These emergency numbers should also include out of area contact numbers for family member to check in with in case local lines are overwhelmed.

Meeting Place (s):

In case the family home is damaged or otherwise unsafe, it is important to have an agreed upon location(s) that all family members can meet back up. In choosing this location(s), consideration should be made that this location will remain safe during times of emergency.

Evacuation Plan:

In cases where evacuation is advised or required, it is important that every family member know safe evacuation routes, what should be taken and what should be done before leaving.

Special Considerations:

Children - Children react to disasters and change differently than adults. They also will need more assistance to take appropriate action. Parents should take additional steps to help their children prepare and cope during an emergency event. For more information, go to <https://www.fema.gov/children-and-disasters>

Senior Citizens - As with children, senior citizens may need additional assistance to take appropriate action during disasters. Some of this assistance may be medically related, require additional protection against weather extremes (cold / heat/ precipitation etc.) or special preparedness issues with medical and pharmaceutical needs. For long term disasters, there is a federal program known as the Emergency Prescription Assistance Program. For more information, go to <http://phe.gov/Preparedness/planning/epap/Pages/default.aspx>

People with Disabilities - People with mobility, cognitive or other disabilities will require assistance during times of disaster. In addition to obvious challenges during times of evacuation, some may experience issues of increased fear from being forced out of normal conditions. For

more information, go to <https://www.disability.gov/resource/disability-govs-guide-emergency-preparedness-disaster-recovery/>

Pets - Since Hurricane Katrina, communities are required to plan for pets and animals during disaster. However, this does not mean that animals are welcome anywhere. Nor does it mean that there will not be special requirements such as keeping them in a cage and /or providing food and other care for them. Pet owners should check with local authorities to inquire as to how animals will be cared for during disaster and what requirements should they plan for.

Appendix Two: Disability Flyer (Supplemental Information for Theme Three)

The following table is from the Center for Disease Control describing how children's bodies are different than adults.

- Children's bodies are different from adults' bodies.
 - They are more likely to get sick or severely injured.
 - They breathe in more air per pound of body weight than adults do.

- They have thinner skin, and more of it per pound of body weight (higher surface-to-mass ratio).
- Fluid loss (e.g. dehydration, blood loss) can have a bigger effect on children because they have less fluid in their bodies.
- They are more likely to lose too much body heat.
- They spend more time outside and on the ground. They also put their hands in their mouths more often than adults do.
- Children need help from adults in an emergency.
 - They don't fully understand how to keep themselves safe.
 - Older children and adolescents may take their cues from others.
 - Young children may freeze, cry, or scream.
 - They may not be able to explain what hurts or bothers them.
 - They are more likely to get the care they need when they have parents or other caregivers around.
 - Laws require an adult to make medical decisions for a child.
 - There is limited information on the ways some illnesses and medicines affect children. Sometimes adults will have to make decisions with the information they have.
- Mental stress from a disaster can be harder on children.
 - They feel less of a sense of control.
 - They understand less about the situation.
 - They have fewer experiences bouncing back from hard situations.

Considerations for people with disabilities Those with disabilities or other special needs often have unique needs that require more detailed planning in the event of a disaster. Consider the following actions as you prepare:

- Learn what to do in case of power outages and personal injuries. Know how to connect and start a back-up power supply for essential medical equipment.

- Consider getting a medical alert system that will allow you to call for help if you are immobilized in an emergency. Most alert systems require a working phone line, so have a back-up plan, such as a cell phone or pager, if the regular landlines are disrupted.
- If you use an electric wheelchair or scooter, have a manual wheelchair for backup.
- Teach those who may need to assist you in an emergency how to operate necessary equipment. Also, label equipment and attach laminated instructions for equipment use.
- Store back-up equipment (mobility, medical, etc.) at your neighbor's home, school, or your workplace.
- Arrange for more than one person from your personal support network to check on you in an emergency, so there is at least one back-up if the primary person you rely on cannot.
- If you are vision impaired, deaf or hard of hearing, plan ahead for someone to convey essential emergency information to you if you are unable to use the TV or radio.
- If you use a personal care attendant obtained from an agency, check to see if the agency has special provisions for emergencies (e.g., providing services at another location should an evacuation be ordered).
- If you live in an apartment, ask the management to identify and mark accessible exits and access to all areas designated for emergency shelter or safe rooms. Ask about plans for alerting and evacuating those with sensory disabilities.
- Have a cell phone with an extra battery. If you are unable to get out of a building, you can let someone know where you are and guide them to you. Keep the numbers you may need to call with you if the 9-1-1 emergency number is overloaded.
- Learn about devices and other technology available (PDA's, text radio, pagers, etc.) to assist you in receiving emergency instructions and warnings from local officials.
- Be prepared to provide clear, specific and concise instructions to rescue personnel. Practice giving these instructions (verbally, pre-printed phrases, word board, etc.) clearly and quickly.
- Prepare your personal support network to assist you with anticipated reactions and emotions associated with disaster and traumatic events (i.e. confusion, thought processing and memory difficulties, agitation, fear, panic, and anxiety).
- You don't have to be the only one prepared – encourage others to be prepared and consider volunteering or working with local authorities on disability and other special needs preparedness efforts.

From the FEMA / Red Cross Book *Preparing for Disaster for People with Disabilities and other Special Needs*

Appendix Three: Supplemental Information for Theme Four

Performing Head to Toe Assessments

After all survivors in the area have been through triage, you can begin head-to-toe survivor assessments. Head-to-toe assessment allows you to determine, as clearly as possible, the extent of injuries. Then, you can determine what type of treatment is needed and document any injuries. Be sure that you assess all survivors! Injuries are not always immediately apparent; those who appear unhurt may be suffering, too.

During an assessment, you will look for indicators that help you determine the nature of the person's injury. Indicators may include bruising, swelling, and pain. You should also try to find the "mechanism of injury." This is how a person has been hurt and may point to probable injuries. Your assessment can be both hands-on and verbal.

If the survivor is conscious, your assessment should be both hands-on and verbal. There are several important reasons to talk to the survivor during assessment. First, you need to ask permission. The survivor has the right to refuse your help. You should always ask permission before you conduct the assessment. Then, you should talk to calm the person. Tell the person who you are and what you are doing, to help reduce his or her anxiety. Finally, to obtain information, you can ask questions. Ask the person to describe his or her symptoms and to tell you how the injury occurred.

Assessment Guidelines

There are several things you should keep in mind as you conduct a head-to-toe assessment. Follow these guidelines:

- Be alert. Pay careful attention, using all of your senses.
- Look, listen, and feel for anything unusual.
- Be thorough.
- Perform an entire assessment before beginning any treatment.
- Be cautious. Treat all unconscious survivors as if they have a spinal injury.
- Be consistent. Conduct assessments systematically, the same way every time.

Basic Care for Common Injuries During your patient assessment, you may notice a wide variety of injuries. There are treatments you can learn for the following injuries:

- Burns
- Wounds
- Fractures, sprains, and strains
- Hypothermia

Basic information in this lesson will help you become familiar with the injuries and recommended treatments. But remember, don't try to apply these treatments until you have had classroom training!

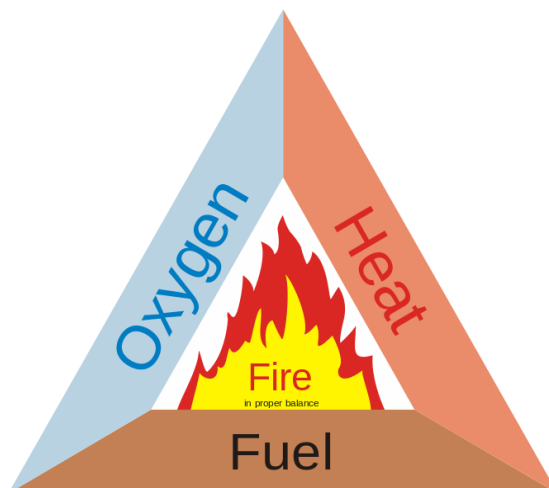
Appendix Four – Fire Extinguishers / Fire Theory



Fire Extinguishers

Fire Extinguishers are rated by both classification and size. They may be labeled Class A, B, C, D or F or a combination thereof. The most common household type fire extinguisher is class ABC.

- Class A fire extinguishers are only good for wood, paper and other organic solids. The most typical type of Class A Fire Extinguisher is water filled; however, foam and chemical class A fire extinguishers can be found. Water types of extinguishers should never be used on cooking or electrical fires as water can cause additional dangers that may spread the fire.
- Class B fire extinguishers are used for fires involving flammable liquids such as petrol, diesel or oils. Fire extinguishers currently available for dealing with Class A or B fire should not be used on cooking oil or fat fires.
- Class C fire extinguishers are typically used for fires involving gases Dry powder fire extinguishers may be used on Class C fires. However, you need to consider the circumstances of their use and combine this with action such as stopping the leak, to remove the risk of a subsequent explosion from the build-up of unburnt gas
- Class D and F fire extinguishers are specialized and not typically used by homeowners. Class D is for metals and F is for cooking oils such as deep fat fryers.



Fire Theory

Fire requires three things to burn; fuel, heat and oxygen. This is what is known as the fire triangle. Removal of any one or more of the legs will extinguish the fire. Shoveling dirt or spraying foam on to a fire removes its access to oxygen. Spraying water on a fire removes heat. A natural gas or propane fire will dissipate as the fuel is shut off. A great visual of this is placing a glass over a small candle, as the O^2 is consumed, the flame flickers and goes out. This theory will work in most types of fires. The only exception to this rule would be certain metals such as titanium, lithium or magnesium and certain chemicals that can produce their own oxidizers. A fire based on a reaction with these oxidizers can be very difficult to put out until the oxidizer is exhausted; that leg of the fire triangle cannot be broken by normal means.

Appendix Five: Wild Fire Evacuation.

If a wildfire threatens your home and time permits, taking the following precautions will also reduce risk:

- Shut off gas at the meter. Only a qualified professional can safely turn the gas back on.
- Seal attic and ground vents with pre-cut plywood or commercial seals.
- Turn off propane tanks.
- Place combustible patio furniture inside.
- Connect garden hose to outside taps. Place lawn sprinklers on the roof and near above-ground fuel tanks. Wet the roof.
- Wet or remove shrubs within 15 feet of your residence.
- Gather fire tools such as a rake, axe, handsaw or chainsaw, bucket, and shovel.
- Back your car into the garage or park it in an open space facing the direction of escape. Shut doors and roll up windows. Leave the key in the ignition and the car doors unlocked. Close garage windows and doors, but leave them unlocked. Disconnect automatic garage door openers.
- Open fireplace damper. Close fireplace screens.
- Close windows, vents, doors, blinds or noncombustible window coverings, and heavy drapes. Remove flammable drapes and curtains.
- Move flammable furniture into the center of the residence away from windows and sliding-glass doors.
- Close all interior doors and windows to prevent drafts.
- Place valuables that will not be damaged by water in a pool or pond. If advised to evacuate, do so immediately. Choose a route away from the fire hazard. Watch for changes in the speed and direction of the fire and smoke.

For additional information, please go to [wildfire mitigation](#) or [Community Wildfire Protection Plan](#)

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**The Prepare in a Year – Texas Challenge
is a project of Rich Hildreth, the 2016/2017 Communications / Outreach VISTA for
the Blanco River Regional Recovery Team (BR3T.org).**

