

The Overlooked Task of Fire Preparedness

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Fire prevention is an often overlooked and underestimated preparedness issue. Let's face it; fire safety is near the bottom of our preparedness concerns. But, what if you have a year's worth of food, 6 months of water stored, all of the ammunition to protect your family for multiple generations, and you neglect fire safety? What if your home burns down, or your survival gear is destroyed because your tent is too close to the camp fire? Whether your plan is to Bug In or it involves a tent colony on some remote land, ensuring you have a strong fire prevention strategy will protect your belongings and maybe even save your life if that fire were to strike.



In 2011, U.S. fire departments responded to 370,000 home structure fires. These fires caused 13,910 civilian injuries, 2,520 civilian deaths, and \$6.9 billion in direct damage (National Fire Protection Agency). An important thing to understand here is fire departments responded to these fires. If a collapse were to occur, fire departments will likely not be active, and the public water system would not be operational. Would you have the necessary skills and equipment to fight fires on your own?

The Fire Dilemma

So, you have been voted or volunteered for the executive committee for your retreat, and have been tasked with finding a solution to the issue of fire protection. You have to develop a plan to combat fires, and implement fire prevention strategies. First you must identify the realities of fires:

1. Fires can be unpredictable, indiscriminate, and all devouring.
2. Not everyone can fight fires.
3. You will be limited by your home's/retreat's circumstances and water supply.

Basic Preventive Measures

You determine that to be successful at fighting a fire, first you must prevent them. There are some basic preventive measures that can be done to limit your exposure to fires in your home / retreat area.

1. Do not allow random, open fires. Keep fires in contained spaces (formed fire pit, barbeque area, or fire place) especially during summer or times of extreme dry weather, and during windy conditions. During summer, dry weather, and windy conditions you may need to impose fire restrictions. Instead of burning wood fires, use propane or other fuels for food preparation, and body temperature regulation.
2. Keep the areas surrounding buildings, and/or vehicles, clear of flammable materials. Create a buffer zone around structures and vehicles, limiting dry materials which can easily combust. Ideally, you want to have a 90 foot buffer zone around any dwelling or vehicle parking location. At a minimum, ensure vegetation and trees are at least 30 feet from any dwelling. Clear dead vegetation away from structures.

3. Keep firewood or other dry fuels a minimum of 30 feet from a structure, until they are intended to be used.
4. Keep flammable fuels in a storage area away from primary structures, preferably in a separate shed.
5. Keep all flammable materials, firewood and fuels, uphill as fire travels uphill quickly.
6. Have a fire extinguisher near living and sleeping areas, in order to quickly react to a fire.
7. Do not place tents, or other flammable fabrics, close to camp fires.
8. Closely monitor kerosene, propane, or other fuel burning lanterns, and candles, as they can easily start fires if dropped, turned over, or by accidentally placing other flammable materials and fabrics on them.

Home and Retreat Specific Preventative Measures and Recommendations

With the basic principles identified, next you focus on fire prevention for your home / retreat. Understand, you will have to identify if these recommendations are even possible.

1. Design your home or retreat buildings from fire resistant materials if available; tin, fibre cement, brick, and concrete are more fire resistant than timber, metal, and fabric structures. Concrete tile roofing is also recommended.
2. Have small water supply points (ponds, wells, and storage containers) scattered across your property, rather than one primary water source. This provides primary and secondary options, and a means to repel a fire instead of inundating your one supply if you cannot access it. If you are using a small pond as a resource, be sure to fence them off to avoid children drowning; water is a child magnet.
3. If you have a pool or pond close by, have a **water pump** that is capable of producing significant water pressure, and which can move water moderate to long distances.
4. Use metal buckets with sand (ammo tins work well) for the smokers to safely put their refuse (matches and cigarette butts). Additionally, ensure trash is not put into the bucket, as it can easily ignite.

Types of Fire Extinguishers

Now that you have prevention mechanisms in place, next you focus on items needed to fight fires. The easiest method, and one that is the most cost effective to achieve, is purchasing fire extinguishers. You can even require members of your group to have individual / family fire extinguishers. Types of fire extinguishers include:

1. Water – Used for wood, paper, textile, and solid material fires. Do not use on liquid, electrical, or metal fires.
2. Powder – For liquid and electrical fires. Do not use on metal fires.
3. Foam – Used on liquid fires. Do not use on electrical or metal fires.

Fire Prevention (Continued)

4. Carbon Dioxide – Used for liquid and electrical fires. Do not use on metal fires.

We recommend having a type ABC fire extinguisher for home use, and a type BC for vehicle use. Products we recommend: **Kidde 21005779 Pro 210 ABC, 160CI / Kidde 466204 Pro 10 MP / First Alert Auto Fire Extinguisher.**

Low Tech Means for Fighting Fires

Ideally, you want to have a vast water supply, multiple extinguishers, and other equipment needed to fight a fire. But, what if you did not have these necessary supplies? Sand and Wool blankets can be used.

1. If fighting oil or other liquid fires, or a fire resistant to water, use a fire sand bucket (also called a fire bucket). A fire sand bucket is filled with dry sand, which is free of moisture and flammable materials. The sand starves the fire of oxygen. Have these buckets placed in areas where liquid based fires can be started; in the kitchen, near grills, and near vehicle and fuel storage areas.
2. Use **fire blankets** in your home / retreat as these don't expire or need recharging after use; as do fire extinguishers, and can be very effective against small fires. Normal **wool blankets** can be used in an emergency.
3. If the fire spreads, get your community organised with sacks and damp blankets to beat out the fire front. Have a supply of beaters made from burlap type sacking and wool blanket pieces in labelled locations (fire points). You will probably need to engage in training of some sort to prepare people for fire fighting, and in larger fires you will need to have shifts of people as fire fighting is hard, hot work; heat exhaustion can be a big medical issue along with smoke inhalation.

Beyond the Fire Extinguisher

Consider investing in the purchase of stirrup pumps and buckets for minor fires, and a larger trailer or even a second hand fire appliance if your retreat is big enough. Obviously, this can be an expensive venture depending on the route you take.

If you intend to fabricate or purchase a trailer capable of moving several thousand pounds of water, you will also require a tow vehicle capable of pulling the weight. A gallon of water weighs 8.35lbs. So, 275 gallons of water (as pictured below) weighs approximately 2300lbs. Add the trailer weight (let's say 300lbs) and support equipment (another 150lbs), you will need a vehicle capable of towing 2750lbs. This vehicle will also need a hitch, the correct ball, and you will also need to consider whether the vehicle will provide power for your appliance, and/or hold additional fuel.



The example trailer has been designed and built by an engineer for use on farms. It has two fire type flat hoses, a 275 gallon water tank, and a pickup hose which allows it to pump water from any source; river, pond, and/or pool.

If you are on a budget, and cannot afford a water trailer, you can simply use a gas powered pump, in combination with a large water source; pool, stream, river, or lake. It is recommended to use a gas powered pump during a survival situation, if you set aside fuel for this purpose. Additionally, for the same price point, electric pumps are not as efficient, as they cannot generate the same amount of water flow as a mid-grade gas powered pump. Also, electric pumps require electricity, usually 110-120 AC power, which means you will need to have electricity to power them. This reduces portability since you will need a power source wherever you decide to battle the fire (generator power, wall AC power, or a substantial battery bank).

Any pump will need someone to monitor it at all times; to refuel as required and keep an eye on the intake pipe is still in the right place and not sucking up mud or anything else.

If you have the money, you may be able to purchase a small 4WD fire engine from a fire department disposal sale, eBay, or even find a fire pump or appliance at an auto wrecker. Remember the vehicle will be staying on the retreat area; so you won't need registration once it gets there.

Conclusion

However you decide to tackle the issue of fire it will be one of the most important things to consider when defending your home against one of the most likely causes of your demise. When dealing with fire safety, prevention is better than cure. Please take a close look at your fire prevention strategies and fire fighting equipment, and determine if you are properly prepared.

Disclaimers: 1) First off I am not a Firefighter; this information comes from my study towards a future role as an Emergency Management Officer with a local council which generally involves work as the Principle Rural Fire Officer as well. 2) This information series is intended to get you thinking about some of the issues around a retreat and ideas to reduce the impact of any of the issues arising. 3) The New Zealand National Rural Fire Authority produces information which has been used here as well as the New Zealand Fire service. 4) You should seek advice from trained professionals in any situation, and try and recruit a couple of Fire Fighters for your survival group and/or retreat. – Biggleskjr

For more information on Fire Prevention and Preparedness, please read the following publications....

Fire Smart Home Owners Manual
(FS912 - New Zealand Government)

Wildfire - Are You Prepared
(FEMA FA-287)