



Disaster Planning and Recovery: Details for Personal and Professional Success

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Failing to Plan = Planning to Fail

For many years, disaster recovery and business continuity planning were concerns addressed only by larger corporations and well funded enterprises. Data center preparedness, contingency plans, and hot backup locations for data storage and operations were expensive to activate and to maintain. In the case of larger entities, not a lot has changed in this respect. Alternate locations for larger corporations, however Spartan, come with added expenses to lease or purchase and to outfit with the infrastructure and equipment needed to resume business quickly. For small and mid-sized businesses (SMBs) and families, however, the current landscape of disaster and contingency planning products, information and services are better than ever, and offer virtually any organization or household the ability to ensure that they are not caught unprepared in the face of a major interruption of services or the sudden and sustained unavailability of goods.

Recent events such as the Tsunami in southeast Asia, heat waves and flooding in Central Europe and the hurricanes that decimated the U.S. Gulf Coast have brought the concepts of survival and temporary self-sufficiency to the top of many corporate and domestic to-do lists. The images of those who had lost everything and were at the mercy of governmental infighting and ineptitude have been burned into our collective consciousness, and should not be forgotten. What then, is a family or SMB to do? What are the priorities for assuring relative comfort and safety during the most harrowing of times? We have polled dozens of leading industry experts and combined their suggestions with our own knowledge of business continuity and data backup to offer the following overview. This overview is intended to address the highest-need items and

greatest value services that disaster victims and industry experts have reported as critical during the days and weeks following a major event.

While the suggestions contained in this document are comprehensive and circumspect in nature, the exact disaster recovery plan will vary according to the specific needs of your business or household. Read on, and consider the importance of advanced planning and action prior to a disaster. The best evacuation or survival plan is worthless if it exists only on paper. We'll begin with a general disaster recovery plan which is applicable to both businesses and households, and then concentrate on business-specific concerns. A complete plan must assume that the post-disaster situation will be ongoing and that evacuation will be difficult, if not impossible, in the short term. Keep this in mind while we cover such topics as shelter and water rations. If you are fortunate enough to be able to evacuate to a safe environment with electrical power and utilities then of course you should (and will!) do so. If not, the checklists and suggestions included here could save your life and those of your coworkers and family members – as well as your business.

Immediate Concerns – Assess and Address

As with any emergency, the first step towards recovery after a disaster is to assess the circumstances and prioritize activities according to the situation. This applies regardless of the environment you are in when the disaster strikes. Is evacuation or relocation immediately necessary? If so, a clearly stated and rehearsed building and area evacuation plan is a critical piece of the larger disaster plan, and can assure that the maximum number of people can be quickly and safely removed from a building in peril.

Professional first responders follow a surprisingly simple initial protocol of removing people from further harm and administering first aid to those who require it. If there are injuries as a result of the event, you must prioritize these as well, assisting those who are still in peril or have spinal/cranial injuries and open wounds first. Immobilizing those with injuries is also a priority, and may be extremely difficult in certain situations. Training in first aid is highly suggested for family or business principals, and specific training for localized or probable hazards such as flood, fire, earthquake or tornado-related injuries is also encouraged.

Infrastructure security is also a major concern in the moments immediately following any type of disaster. Examples of securing a building or home might include disconnecting or disabling power and/or fuel lines. This responsibility must be thought through, planned in detail and assigned beforehand, and extreme caution must be exercised to avoid further injury or loss of life. Depending on the nature of the event, downed power lines or active gas leaks may prevent or complicate the deactivation of these services. Minimum preparations include a written (and safely located) description of the location and operation of gas and electric shut-off valves, including those for adjoining or adjacent buildings and structures. Careful communications with neighbors can ensure that all parties are aware of the plan and that multiple, knowledgeable people are authorized to interrupt services on behalf of the group.

After these needs are met, and assuming that the immediate threat has passed, the next concern is communication to the affected parties that there is a plan in place, and that everyone needs to remain calm while the plan is reviewed and implemented. The

existence of a plan is the most critical key to success. It should exist in hard copy as well as in the minds of those who are tasked with implementing it. Once your colleagues or family members know that there is a comprehensive plan and that it will be implemented, emotions and activity tend to become focused on pitching in instead of panicking.

Before delving in to the details of a disaster recovery kit and plan, let's review a list of planning and preparation essentials:

- **Prior to event:**
 - Discuss and plan for possible disaster scenarios with staff and family, including escape and evacuation routes
 - Review insurance coverage for business and home; ask your agent what specific coverage is available; create a photo album of buildings and inventory, contract with an online backup provider to preserve computer data.
 - Create a comprehensive, written and rehearsed disaster recovery plan encompassing activities and materials needed for the survival and comfort of your staff or family
 - ACT on the plan, collect and safely store the plan and all related materials and equipment, formally assign duties and roles, first aid training
 - Communicate the plan to staff, family members, and neighbors - redundantly assign roles and responsibilities
- **Immediately after event:**
 - Assess the circumstances, perform life-saving activities, prioritize and treat injuries, and evacuate if appropriate.
 - Ensure Infrastructure security – shut off gas, electric and water feeds if appropriate, as well as those for adjacent buildings
 - Communicate disaster recovery plans to your group, request periodic status reports from all affected parties

What does a Disaster Recovery Kit Contain?

Now that we have looked at the immediate and basic needs of any business or group in the moments following a disaster, let's take a step back and consider the contents of a good disaster recovery kit and plan, and exactly what each should include to ensure success.

A valid disaster recovery plan should include a comprehensive analysis of the needs of a particular group of people, their probable location and status at the time of the event, and various possible scenarios in terms of the type and duration of their needs. Many people tend to equate emergency preparedness only with supplies of food and water, focusing on the obvious and bare essentials for survival in the long term. Reality and the experiences of thousands of catastrophe survivors validate the importance of those particular needs, but also point to many other items and services that are equal in their importance, if not more critical in the short term.

If disaster strikes during nighttime hours and the flow of power to the office building or home is interrupted, multiple sources of reliable light are perhaps the first and most

important need. It is difficult to assess a situation that you can't clearly see, and evacuating a damaged building in the dark is perilous at best. A well-stocked first aid kit is also a priority item, as it allows you to provide care to injured staff or family using appropriate equipment and materials – instead of making do with potentially unsafe substitutions. For members of your group that have specific medical concerns such as diabetes, epilepsy or asthma, and for infants or sick staff or family members, having a backup of their medication or other needed materials is particularly important, especially when you consider that stressful situations can exacerbate certain conditions.

Review of first responder equipment:

- Light sources – Flashlights, LED or halogen headlamps, candles, backup batteries
- First Aid Kit – Comprehensive, including splints, bandages, sutures, scissors, antiseptic, antibiotics, etc.
- Medication – prescriptions or emergency medications for special members of the group which are not included in the general first aid kit

Water, Food, Communications Equipment and Fuel

Water service is interrupted by many disasters including flooding, hurricanes, and earthquakes. Water is necessary to sustain life. Most experts agree that kidney shutdown and death will occur within 7 to 12 days after going without water, and within much shorter periods if heat or continued physical activities are factors. An emergency ration of bottled water should be at or near the top of any emergency supplies list. Emergency preparedness guidelines issued by the U.S. Department of Homeland Security recommend that all households maintain an emergency supply of water - at least one gallon per person per day for three days - for drinking, cooking and personal hygiene. Also consider that children, nursing mothers and sick people may need more water than the average person. While the FDA has not posted an official shelf life for bottled water, many sources suggest storing the water at room temperature or below and rotating the stored water every 6 months. Ensure an additional measure of security by adding a water purification device to the emergency kit.

Food is another fairly obvious component of a well planned survival or disaster recovery kit, and care should be taken while preparing and storing the food cache. Choose foods that are relatively high in calories, will store well for long periods of time without refrigeration, and are packaged in a way that makes them resistant or impervious to the elements. Be sure to pack a manual can opener and any other required utensils as part of the kit – chances are you won't have the opportunity to secure these items after the fact. An air-tight container is an ideal storage solution for your rations and utensils, and will ensure that even in a flood or windstorm the meals will be safe from water or other hazards. Canned meats, fruits and vegetables, protein or fruit bars, peanut butter, crackers, dry cereal or granola and canned juices are good basic items. Above all, stock your kit with food that your colleagues and family will actually eat. The most expensive MREs and survival foodstuffs are worthless if they are considered inedible by your group. Also consider the dietary needs or requirements of specific members of your group. Babies will need formula, diapers, bottles, medicine and other specialty items in

order to survive, so consider these items as carefully as your own rations. Also consider your pets. While durable and resilient, they will also need their own food and water.

Communications equipment is a lifesaver in many adverse situations, providing much needed information about what has happened and where official aid can be found. Battery powered transistor or short-wave radios, walkie talkies, cellular phones, satellite phones, and text-message-capable devices should be considered. Power is necessary to run almost all of these devices, so a good supply of batteries in the appropriate sizes and voltage for all of them should be included in your kit. Other sources of power might include gas powered generators, solar recharging devices, and redundant fuel supplies in the form of Propane canisters, unleaded and/or white gas, and other alternatives such as Esbit® fuel pellets (a brand of Hexamine solid fuel tablets, commonly used in ultralight backpacking stoves) are good options. For larger enterprises, or for those who need to power generators or a motor pool for extended periods, a secure fuel storage plan should also be implemented – and professional assistance in setting up this fuel depot is greatly encouraged.

Basic necessities checklist:

- Bottled water – equivalent to 1 gallon per adult per day, three days minimum, store at or below room temperature, rotate every 6 months
- Food – non-perishable, high calorie foods stored in an air-tight container. Utensils, food for babies, pets, or special diets.
- Communications equipment – radios, phones, walkie talkies, email/internet/text message devices, backup batteries
- Power and Fuel – generators, gasoline, propane, backup batteries, solid fuel, solar cells

Shelter and Comfort

Shelter is also a primary concern, as continued exposure to the elements can lead to hypothermia, heat exhaustion, or other ailments – depending upon the time of year and your geographic location. Dealing with the post-disaster circumstances will be plenty exhausting without also fighting a losing battle against Mother Nature.

Tarps, tents and other relatively portable shelters are best in most post-disaster situations. You'll also want to consider localized factors such as mosquitoes, gnats and other annoyances – and plan your shelters accordingly. Cots, pads, sleeping bags and other concerns might at first seem somewhat elective from a survival standpoint, but should be considered an important part of your disaster kit, along with jackets, blankets and extra tarps for warmth and protection, or for replacing articles of clothing that were torn or otherwise damaged during the event. Plastic sheeting and duct tape are perfect for sealing openings in windows, under doors, vents and outlets, and will be especially important if the disaster is chemical, biological or radioactive in nature.

Toilet paper, paper towels, soap, antiseptic wipes, insect repellent, an adjustable wrench or pliers and other items can make a huge difference in the comfort and security of your group, and should be included when possible. Most of these items can be stored indefinitely, but nonetheless should be included on a list for periodic review of functionality and expiration dates.

A substantial supply of cash and spare change should also be included in your disaster kit. In the midst of a disaster area there are usually hot spots with electrical service, and a cold soft drink or a payphone call can rejuvenate and energize victims and provide a sense that things will eventually get back to normal. Gas stations and supermarkets are also prone to switch to a cash-only basis due to the interruption of electrical services used to power authorizations for credit and debit cards. Local banks and ATMs may be offline for extended periods following a catastrophe.

Shelter and Comfort Checklist:

- Shelter – Tarps, tents, portable shelters, insect protection, cots, pads, extra blankets, plastic sheeting, duct tape
- Comfort – Toilet paper, paper towels, soap, antiseptic wipes, insect repellent
- Cash/Change – for re-supplying on cash-only basis, miscellaneous

Just as your disaster kit is a backup of the items and materials you would need during a normal day, you should consider a backup for the disaster kit. If the primary kit of emergency supplies is destroyed in the disaster, you'll be relieved to know that there is another, perhaps identical, kit stored elsewhere. Likewise, offsite backups of personal and business computer data, copies of important documents like passports, identification, bank records, insurance policies and credit cards can be invaluable in a time of crisis.

Let's Get Down to Business!

For businesses, recovering from a major disaster is a two-fold consideration. It can be helpful to think of your business as another living entity, such as a family, that will need special consideration and accommodations to be comfortable. This family will need to approach disaster recovery preparation in many of the same ways as laid out in the Immediate Concerns section of this document, with special consideration given to certain areas.

One area of particular concern to any business is safeguarding important and often irreplaceable information stores. Contracting with an online backup service provider or deploying remote backup software prior to a disaster can ensure that your business can resume operations with your data intact, even if you have to relocate to another city in order to set up an office. Besides your employees and coworkers, it is computer data, not hardware or infrastructure, which is the single most valuable and irreplaceable asset of most businesses. With an online backup service provider, your mission-critical records are safely backed up to offsite servers on a regular basis, instead of being destroyed with the rest of your equipment. Computer data related disasters are frequently not directly related to a natural disaster such as a hurricane or tornado. A minor fire or broken water pipe can often wreak havoc with computer systems and data stores, resulting in data losses on par with that found after a larger-scale disaster.

Contingency planning should also extend to payroll, financial decision making, electronic correspondence and accounting procedures. Roles, workflow plans, availability and

storage of backup materials, and responsibilities should be designated and assigned well in advance, and incorporated into a comprehensive written plan that is stored in multiple locations. Backup personnel should be designated for each employee, in the event that one or more of your staff is unable to report to work.

Disaster Partnership Planning - DPP for the SMB

Establishing an alternate business location in advance of a disaster is a brilliant and cost-effective way to quickly transition to a new base of operations in an emergency. Entering into a Disaster Partnership Plan (DPP) with another business located outside the probable threat zone assures that you can distribute alternate phone, mailing, and email contact information to your clients and contractors before a disaster occurs. The disaster partnership plan should spell out exactly what your host partner will provide for you, and will allow you to know ahead of time what materials and staff can accompany you to the alternate office.

While not necessarily a legally-binding agreement, a DPP can specify the location of your temporary offices (unused or vacant office space at another existing businesses, for example), the number of your personnel that the office can support, inbound phone lines and numbers that might be temporarily dedicated to you and your staff, the advanced creation and testing of appropriate email accounts at the new business, hours of operation, a mutual non-disclosure agreement covering business operations and proprietary information that might be shared during the DPP cohabitation, and other items of this nature. A DPP is designed to take the guesswork out of the temporary relocation of your business and is perhaps the most cost-effective and easily implemented aspect of a comprehensive disaster plan. It also gives a business the opportunity to reciprocate if their partner's location is affected by a disaster.

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The ability to know the status of, and to communicate with, your employees after a disaster is a great bonus, allowing information to be shared and helping to minimize the disruption of temporary operations. Establishing outsourced and redundant means of communication is critical, but doesn't have to cost a lot of money. Sure, satellite phones for all executives are one option, and free web-based email accounts (as a temporary alternative to in-house server based email) are another good one. At the very least, establish and distribute a telephone hotline number for all employees to call as soon after the danger passes as is possible, to report where they are, how they are doing, and how they can be reached. Stable communications may not be possible for a fairly long period of time, but updating the message that greets your employees when they are able to call the hotline can help you advise them on projected return-to-work dates and other important company information.

Again, the plan is the key to success. Discuss what natural or other types of disasters or emergencies might affect your company, both internally and externally. Plan for all scenarios and how your company would respond to each, in detail. With a well thought out business continuity plan, your business should be able to resume partial operations in a relatively short time and be functional within 24 to 72 hours. The actual times will vary, of course, according to the scope and severity of the disaster, and the ability of

your staff and employees to evacuate the affected area and/or set up temporary offices. Likewise, the actual plan will vary from basic to complex depending on the size, business focus, and location of a particular organization. A good disaster recovery planning worksheet, as well as other detailed information on business continuity planning can be found here: <http://remote-backup.com/whitepapers/SampleDRplan.pdf> .

Prior to the event:

- Review insurance coverage, limitations and deductibles. Inquire about Business Interruption Insurance and about specific policies that cover disasters that are possible in your area – understand exactly what coverage you have and don't have
- Employ the services of a remote backup service provider – safely store a copy of mission-critical computer files and data offsite, discuss and prepare written plans covering the procedures for 'normal' data restores and disaster recovery procedures
- Keep other forms of data backup locally – CD, DVD, or even paper copies of records are better than no records at all – and may prove critical in the short term. Include contact information for contractors (and backup contractors), clients and suppliers, as well as insurance representatives
- Pre-arrange an alternate business location – enter into a Disaster Partnership Plan (DPP) with a business or leasing company outside of the threat zone. Consider your choice carefully, and with due consideration given to special infrastructure or communications requirements
- Establish check-in procedures - provide all employees with multiple and flexible means of contact and status reporting

Summary

Whether your disaster plan is for a business, school, or family, there are many common elements to its creation. Among these are early and advanced planning, scenario discussions, escape and evacuation routes and communications planning, creating a written and well-circulated plan, development and maintenance of a comprehensive disaster recovery kit, redundancy for all supplies, equipment and computer data, a thorough understanding of the roles and responsibilities of all concerned parties, and an annual review of the plan.

Taking these steps now will not decrease the odds of your family or business being faced with a disaster. It will, however, ensure that you and your group are well prepared for the worst if it should come.

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