Tools and Supplies For Disaster Cleanup



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This entire kit, including chainsaw and spare parts fits into a medium size roll-about trashcan. The trashcan both protects and collects the items so that they can be placed where they are needed most. The small tools are placed in an orange 'ammo can' style container. The trashcan can be easily loaded into a SUV or pickup truck for transportation. The broom and the snow shovel can be taped to the back of the trashcan as they are a bit long.

Preppers prep well for the disaster and the chaos after the disaster with essentials of food, shelter, water, and many other items. These are not 'survival' items, but can make the cleanup after a disaster go much more quickly and efficiently if you have them and have stored them in one place, rather than trying to hunt through a scattered garage or workbench for each item.

• Major Headings are in bold

- In this list, I've marked *advanced/optional items in italic like this*.
- I've included an Amazon link to recommended items.

• Personal Protection:

- Gloves
 - Leather these are for handling things that leave splinters or abrade your hands. Get comfortable, not necessarily expensive. Get several pairs.
 - Rubber/nitrile gauntlet length. These are for handling things that will contaminate your hands.
- Respiratory protection
 - N95 mask
 - This is the standard medical anti-infective mask. It's pretty good for LIGHT particulate matter, but it's not designed to handle heavy particulate contamination.
 - Particulate respirator
 - This is designed to handle significant particulate contamination and some vapors. The nature of vapors that it can handle is dependent on the cartridge inserted. Useful for applying paint and stains, and for cleanup in contaminated environments. We use

these for woodworking with lots of sanding and sawdust. IT IS NOT A 'GAS MASK.' It has insufficient filtration for any lethal gas and does not supply oxygen for exposure to environments that are 'immediately hazardous'

- Dust mask
 - These masks are pretty good for LIGHT particulate matter exposure, but not designed to handle heavy particulate contamination.
- Boots (preferable-steel toed)
 - If you think you might have to wade in contaminated liquids, get rubber overboots or hip waders. Be sure that there aren't any leaks and that you don't step in anything that goes above the boot. You don't want your tender toes soaking in contamination.
- Flashlights
 - I consider flashlights a personal protection item because what you can't see can kill you! Remember to store the batteries separate from the flashlight.
 - Handheld the gold standard is a Maglight. Get the 2 D cell version with LED light – it lasts longer and is solid!
 - AA flashlights are smaller and quite useful as well.
 - Head mount
 - This allows you to illuminate what you are looking at and use both hands for fine tasks. Get AA version if possible, generally the brighter the better. I keep one of these in every aid bag and every go kit.
 - Remember to store extra batteries and consider extra bulbs for the lights.
- Helmet/Hard hat
 - This really is an insurance policy. After most disasters, even if the structure is stable, there may be loose objects that can fall from a height. Statistics in OK tornado victims show a large number of fatalities due to head injuries. Even a bike helmet will provide some protection, but Kathleen and I have Petzel mountaineering helmets that have more impact protection.
- Eye protection

- Again... statistics show that eye protection has saved many of our troops in battle. You get more protection from good fitting eye goggles, but wrap around shooting glasses will help some. If you can't see, you won't survive long. Few people can concentrate on a task when they have a foreign body in the eye...
 - Consider full face eye protection if you are going to use a chainsaw.
 - Don't just use reading or standard glasses. They aren't sufficient protection for anything moving at speed.
- Knee pads
- Coveralls
 - Tyvek coveralls can be disposable and keep your clothes from getting mucked up during a time when power and water may be scarce to wash things.
 - Used Amazon sells used, cleaned coveralls in multiple sizes for less than \$20 each. These also can keep good clothes from getting mucked up.
- Chain saw chaps
 - These may be in the optional category... I consider them essential if you use a chainsaw.
 - Consider chain saw gloves hands are hard to replace or repair.
- Access/Rescue tools
 - Water/gas shutoff tool





- This is an essential tool for access and or rescue. You need to know where your shutoff valves are for both water and gas and the mains switch for your electrical power. Be sure to check what kind of tool is needed to shut your water and gas off. There are several different kinds of tools/valves available.
 - On Duty Emergency Gas & Water Shutoff 4-n-1 Tool for Earthquakes, Hurricanes, Fires, Floods, Disasters and Emergencies
 - POGO 15" Pry Bar, Wrench, Emergency Gas, Water Shut Off Tool

- Shovel
 - D handle round point
 - D handle square
- Crowbar/wrecking tool
 - 36 to 48 inch
 - Optional 18 inch
- Axe
 - 36 inch handle
 - Optional 24 inch camp axe (not nearly as effective as the bigger axe above)
- o Maul/sledge
 - 20 pound large
 - 8 pound may be useful for smaller folk
 - 3 pound small
- Wedge
 - A good wedge can be used to split wood or level a door.
- Screwdriver set
 - Large and small cross-point/Phillips
 - Large and small standard
 - Often available as a set for cheaper
- Pliers
 - Tongue and groove will handle big items
 - Linesman pliers can handle electrical repairs
 - Cutting pliers can remove fence, wire and reinforcing
- Hammer -framing hammer or rigger's hammer
 - Rigger's hammer has a hatchet head.
 - Estwing E3-R Rigger's Axe, Shock Reduction Grip, 3-Pounds



DEWALT DWHT51138 15 Ounce MIG Weld Framing
 Hammer, Checker Faced



- Adjustable wrench
 - 10 or 12 inch
- Socket set
 - May be useful and work more efficiently than adjustable wrench above
 - Consider dog bone wrenches sockets don't get lost, but not as much clearance due to other sockets.
- Machete
 - *My wife and I carry a machete in our SAR bags. They are quite useful in heavy brush. They could be useful in cleaning up fallen tree limbs.*
- Bolt cutters
 - Can break most locks
 - Cuts through reinforcing rod and or cuts fence to size for your yard.
- Consider a good cordless screwdriver/drill
 - 2 extra batteries
 - Car recharging device (either have a 12 volt plug, or get an inverter with sufficient power to recharge the batteries)
 - Screws have better holding power than nails
 - It's a lot easier than using a manual screwdriver to remove or place multiple screws.
- Consider Reciprocating saw
 - This is a good deal safer than the chain saw, but also cuts both more slowly and with significantly smaller girth of the object being sawn
 - Available in both cord and cordless varieties
 - Cordless should have extra charged batteries.
 - Consider having same battery type as your cordless screwdriver/drill
- Consider a Chainsaw
 - Extra chain
 - Extra 2 cycle oil for mixing with gas
 - Extra chain lube
 - Extra spark plug
 - Tools for changing chain and adjusting chain tension
 - Separate gas can for mixing 2 cycle oil and gasoline

- This is potentially the most dangerous device in this entire list. During or after a storm or earthquake is not the appropriate time to learn how to use the chainsaw! Chain saws are associated with tens of thousands of injuries and a number of deaths each year. You can lose an arm or a leg if you don't know what you are doing with this device. Some of the most serious injuries occur when the chain snags and the saw kicks back toward the operator's chest and head.
 - Chain saws are now required to have safeguards to reduce kickback.
 - Avoid sawing with the tip of the chainsaw as this is where kickback typically occurs.
 - Never saw on a ladder or with the saw above your shoulders.
 - Wear snug-fitting clothing and sturdy work boots, preferably steeltoed.
 - Shield your legs with cut-resistant chaps and the backs of your hands with protective gloves, and wear a helmet with a face shield. These can save body parts! You'll also need hearing protection.
 - Maintenance is key for safe sawing. A chain that's properly sharpened, tensioned, and oiled speeds cutting and helps prevent kickback while reducing wear on the chain and the bar it rides on. A chain that's too loose can slip off the bar and cut the operator as it spins.

• Cleanup tools

- o Broom
- Snow shovel
 - This can be used to clean up glass or piles of rubble. It can be used as a dust-pan for smaller rubble... and, of course in the bigger snowstorm, it is invaluable for the designed purpose.
- Contractor grade garbage bags
 - 55 gallon drum liner or 40 gallon trash bags
 - Get the strongest you can afford: (4 mil best, 3 mil ok. Avoid the cheap 2 mil thickness)
 - Trash, rubbish, brush, or even bodies when necessary.

- Kitchen garbage bags
 - Smaller versions of the garbage bag. Easier to lift/throw/pile... but they aren't as strong, and don't hold as much.
- Ziplock freezer bags quart and gallon size
 - Useful for protecting electronics, papers, documents, money, and even food.
- Disposable rags/towels for cleanup
 - Use these for the tough spills and throw them away.
- Dawn detergent
 - This was used to clean the animals after the Exxon oil spill can be used to clean pets and people as well as dishes.
- Bleach unscented
 - Can be used for both decontamination and water treatment. Be sure to get only sodium hypochlorite – not alternative bleach and not scented bleach
- Vinegar white
- Baby wipes
 - So many uses!
- Disinfecting wipes

• Repair/cover Items

- Rope for towing, pulling, or rescue
 - 550 nylon This is the basic "parachute" cord. It has 7 internal strands and is rated for 550 pounds, hence the name.
 - $\frac{1}{2}$ inch
- Plastic sheeting
- 12" Zipties at least 100
 - You can secure tarps, bags, or even people.
- Duct tape
 - Again...so many uses!
- o Tarps
 - 20x40
 - This is how you are going to keep the rain out when the roof has been torn partly off by the storm.
 - 8x10
 - Groundcloth, tent, shelter, or just plain cover and concealment.

- Consider come-along or winch
- Box of 3 inch screws or similar size nails
- Commercial stapler and abundant long staples.
 - This is how you can protect the contents when the window was broken by the storm or secure the tarp onto the roofing structural members.

• Security

- Chain and Bike locks
 - Chain up and lock your generators, grills, gas cans, and extra propane tanks to a tree or the deck. If you don't, they will grow legs and walk away... <u>Master Lock 72DPF Heavy Duty Cable, 15 Feet Braided Steel,</u> <u>3/8-inch Diameter</u>
- Bike antitheft security alarm
 - Extra batteries
 - Get a LOUD one
 - Because you have to sleep sometime. This can be attached to the chain to alert you when your 'stuff' is disturbed. The loud noise seems to inhibit the tendency for these valuable items to grow legs. ...<u>Anaconda Siren</u>
 <u>Alarm Lock Anti-Theft Security System Door Motor Bike Bicycle</u>
 <u>Padlock 120dB with 3 Keys</u>
- Motion activated alarm
 - Alternative to bike antitheft security alarm that covers an area.
- Power
 - This is a very short, cursory list of a much more robust subject. We will publish more on power supplies soon.
 - Generator
 - You can often find a cheap generator on sale at Harbor Freight (and some other places) for prices around \$100. These will be in the 1000-1500 watt size and can be used to power tools or a refrigerator or a freezer. They will only power ONE of these devices at a time, however. Consider them pretty much disposable after the disaster, since they will cost more to maintain and repair than they do to purchase.
 - You can always find generators for sale AFTER a big snow storm or ice storm or hurricane. The major chains have them stockpiled and ship them to the disaster area by the semi-truck load. When the storm passes, and all

is sunny, what is left often goes on sale. We got a \$1000 5500 watt generator for \$300 new after such a snowstorm. It still runs like new!

- (The generator doesn't fit into the trash can, of course). Spare oil and plugs are stored in a container taped to the generator.
- Be sure to calculate how much power is drawn by each appliance and know how many of what can be powered by your generator. Startup requirements may be substantially different than running power requirements. You may need to unplug several appliances to startup a refrigerator or freezer for example.
- Be sure to consider the gasoline, containers, and possibly gasoline stabilizer needed for the generator.
- Automotive
 - You can use the engine-alternator-battery combination in your car to power many tools and appliances in your house. You will need a substantial inverter that can handle the load of your appliance startup requirements. You may need to have the auto engine on for some or all of the time depending on the power loads.
- Solar
 - Solar is pricy both for the solar panels and the batteries that you need to make them work.
 - Solar requires significant batteries in order to provide more than trivial power. AA batteries just don't power many useful tools for cutting 2x4 or bigger.
 - Solar also requires an inverter to change 12 volt battery power to 110 volt alternating power for most tools and appliances.
- Communication
 - I'm never sure whether commo is a part of the SAR/cleanup function or not. Since the furthest you can communicate without it is limited by the power of your shouted voice, I'm pretty certain that good commo will make the SAR/cleanup phase go much quicker. Commo in this section is limited to two functions: short-range radio for rescuers and cleanup crew to be able to talk to each other and with the local community and long range listening so that you can get weather reports/warning and news about what's happening in the greater world around you.

- Weather radio with hand-cranked power supply ~\$30
 - Should also be able to receive FM/AM transmissions
 - This is really essential if you are subject to 'heavy weather'
- Small, battery powered AM/FM radio. Hand-cranked power supply would be great. Solar would also be great. If you can get one with both weather and AM/FM and alternative power supply you have spent your money well.
 - <u>Eton SCORPION Multi-Purpose Solar Powered Digital Weather Radio Orange</u> (NSP100OR)



This radio has a small solar and crank powered dynamo. With sufficient crank, it can charge many cellphones. It receives weather, FM, and AM.

- FRS/GMRS radios
 - Set of 2 to 4 arrange coverage with neighbors
 - Extra batteries
 - Consider what you will need for communication with your neighbors and friends, keeping in mind that one is none, and two is one. Remember that you will have to have a SOI (signal operating instructions) so that you know which frequency to monitor and how to call for help.
 - Motorola MH230R 23-Mile Range 22-Channel FRS/GMRS Two-Way Radio (Pair)

There are cheaper radios, but you often get what you pay for.

- Handheld CB radio
 - May or may not be useful
- BaoFeng UVR5~\$31
 - HAM radio with MANY functions
 - Can receive weather band
 - Use of this transmitter requires an amateur license.





- Baofeng UV5RA Ham Two Way Radio 136-174/400-480 MHz
 Dual-Band Transceiver (Black) Surprising radio with many good reviews from experienced hams.
- MiFi digital WiFi receiver
 - This connects your computer with WiFi to the cell phone network. Many cellphones can also do this (Look up 'tethering'). Requires a digital plan (separate for the MiFi). Check your cellphone provider for prices and availability of these devices.
 - Since 9/11 and Katrina, the cell phone providers have done amazing jobs of hardening their towers, the computers in them, and the power supply that keeps them working. In the next disaster, the cell phone network may NOT go down. This device would allow you to continue to connect after your other internet provider is belly up.