I. SAR pack

(everything in green might, depending on the deployment, go into disaster duffel for disasters; italic pretty much always goes, non-italic less often) rarely may need to check for some items in bike panniers hanging on inside of coat closet door, daypack hanging on wall above downstairs landing or in back seat of truck; or light green or light orange duffels on top of gear in back of truck. Items regularly move between the daypack in the back seat and the duffels on top of gear in the back of the truck. Winter-only items in cold blue, summer-only items in hot orange

☐ Top Compartment Stuff (lives in top of daypack, transfer if using bigger pack):
  - Handwarmers for gloves/mittens: 2 pair
  - Pack rain cover
  - Trowel, ultralight aluminum, for shitting in the woods, in plastic bag with smaller plastic bag of toilet paper

1 My theory used to be to keep pretty much everything packed in the SAR pack and then take stuff out of it when heading out — this way I was less likely to forget something important. However, most of the time, I throw things in my medium-sized daypack. And getting stuff out of the pack was a big hassle. I still might need the bigger pack for winter or long tasks, so it’s there, but unpacked. The gear is in a large top-zip duffel bag on top of the pack, much easier to get at.

My regular daypack, which also served as my SAR pack for the majority of missions for well over a decade, was an ultralight Alpenlite pack that had nice little pockets on both sides and on the back; the back pocket had multiple subpockets to keep all my little stuff organized. When it wore out, I got an early version of the Vaude Rock Comfort Ultralight 25 pack. It was an ultralight top-loading drawstring pack. With small mesh pockets on either side and a top pocket, but no other pockets. When I did a few long backpacking trips, I got organized by having things always in the same pockets, and I thought that for a daypack, I also wanted lots of pockets. But with the Vaude pack, I gradually adapted to organizing in modules, all roughly the same size. Fleece and GoreTex tops and bottoms are rolled up, and I use 3/4” black webbing straps with a Fastex snap buckle to keep them neatly rolled. (I use a Silylron rain liner if the weather’s potentially bad, so I don’t worry about them getting wet.) Other things are grouped into bags roughly the size of a thin fleece sweater. I throw an appropriate selection of these modules into the pack for any trip or SAR task. When the Vaude pack started wearing out, I tried other packs. I tried an Outdoor Research pack that zips instead of using a top flap and a drawstring. I finally realized why I like packs that are top-loading with a drawstring and top flap: they carry well with just a little bit of gear, and they carry well when you have them seriously overloaded, which is simply not the case with a zip-only pack. So then I got a Marmot Kompressor Summit 28 L pack. It’s a little heavier than the Vaude, but looks as though it will carry small loads well. And for a SAR pack, having the flexibility to carry small or large loads well is important. And carrying well is important, so your pack doesn’t slop around and pull you off of a hill.

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☐ In bottom of pack:
  - 3 extra plastic leaf bags, folded, in 3x5” plastic bags (to give to others; have two in Everyday Emergency Kit that usually gets thrown in SAR pack)
  - Pack rain liner

☐ In back-pad/water-bladder pocket:
  - Folded back pad that may be removed and used under a patient or as a splint
  - Water bladder
  - Two splints cut out from gallon plastic water bottles
  - One splint cut from windshield washer fluid bottle
  - Two medical face masks with clear eye shields in gallon ziplock plastic bag
  - Westcott 8ths 12-Inch Beveled Transparent Ruler (B-70) for putting next to a footprint when taking cellphone pictures
  - Platypus ultralight collapsible 1 liter water bottle (for mixing Gatorade)

☐ Side Pockets:
  - Sunglasses in case clipped to pack
  - Daisy chain with two nonlocking carabiners, clipped to pack
  - ThermaRest sit pad in stuffsack, clipped to pack

1A pack liner seems much more manageable than a raincover; I have a sil-nylon rain cover for both this big SAR pack and for my daypack, which is a top-load pack; but most of the time I use an Integral Designs sil-nylon pack liner, size large. The pack liners are much less bulky than the raincover and work even better to keep your gear dry, but if it’s a downpour, I’ll use both.

1 Many uses, mostly to clip back to a tree to keep it off the ground.

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Light Green Duffel Stuff: Stuff to sometimes or rarely throw into/onto pack (items may be on or in daypack, or in the light green duffel bag in the top left back of the vehicle; stuff in purple should almost always go in pack): 4

□ Small stuff in side pocket:
  □ Spare 1.5" flat black "tent" webbing strap, with dual-adjustable buckle
  □ Mosquito headnet
  □ Short, thin summer gaiters
  □ Electronic thermometer (disposable improvised rectal thermometer)
  □ AA cell (last resort) cellphone charger and 4 AA lithium disposable cells
  □ Sun hat
  □ Spare short webbing with Fastex buckle to put around rolled-up bit of clothing
  □ spare 1.5" flat black "tent" webbing strap.
  □ Few minibiners
  □ Assorted Aloksak plastic bags
    □ For marking convoy vehicle back windows:
      □ In Aloksak bag; window marker
      □ Reflective tape
  □ Altimeter
  □ No-cook food
    □ Snack Bag (yellow nylon/black mesh bag)
    □ Selection of snacks?
    □ 2 packets each to make a quart of Gatorade
  □ Three packages of MRE crackers
  □ ERbar 2400 kcal survival bar, in resealable foil package, and Mainstay 2400 kcal survival bar.

4 I used to carry a Garmin GPS 60Csx. But when I realized I hadn’t used it on a single hike, climb or SAR operation, I ditched it. My Android Verizon Samsung S8 cellphone with BaseCountry Navigator works much better. With a waterproof case for it, an external battery charger, a RAՎpowr QuickCharge 3.0 external cellphone charger (that will also charge others’ phones, has three different charger cords for it) a backup AA cell charger, and a backup-backup solar charger in my Tumi pack, it weighs the same, and is much easier to use and read. And, I’m going to take a cellphone anyway, so the additional weight and bulk is negligible. The only real problem is trying to use the phone in the rain, even in a waterproof case; the phone interprets raindrops as fingers-touches. I used to use light liquid white shoe polish to mark back windows. But the last time I got some, it’s not polish, it’s now “shoe whitener” and it leaves barely-visible markings on the window. I switched to soap, that wasn’t as good. Window markers are available at local craft supply stores and on amazon.com. It washes off with the slightest water, but you can write first on the outside and then trace it on the inside. For the brand I got, blue is the most visible. The reflective tape is for really bad situations, likely convoying through a hurricane (I’ve done that twice, it’s no fun).

□ Search Essentials bag (black nylon/mesh bag, take out if just hiking)
  □ Gloves: summer-weight gloves, on minibiner clipped to outside 10
  □ Compass 11/ Grid Overlay 12/ whistle 13 on lanyard
  □ Maps: two water-resistant pre-grided park maps for McConnells Mill and Moraine State Parks
  □ Flagging tape: one roll of flagging tape
  □ Small ziplock plastic bag with:
    □ 2: Sharpie Mini pens for writing on flagging tape
    □ 2: ASRC Commo Crib Sheets, on waterproof paper
  □ 2: ASRC Grid Overlays
  □ A single dollar bill, folded up in a small plastic bag, for putting next to evidence when taking pictures of it (for scale)
  □ Spare headlight: Zebralight H53 AA Floody Headlamp with headstrap; battery reversed; with three Velcro cable wraps can use to attach to tracking stick to make tracks more visible, and 2 spare AA disposable lithium cells
  □ Five gallon ziplock plastic bags for TAFs and maps
  □ 6 ponitail-style fabric-covered rubber bands, for using a locally-acquired stick as a tracking stick.
  □ 2 pair nitrile exam gloves 14
  □ Bothy Bag: 2-person and 4-person European-style group Bivouac Sacs (one of which is usually in the back section of my SAR pack instead of here) 15
  □ Search Extras bag (dark green nylon/black mesh bag)
    □ Night goggles/helicopter ops:
      □ Lightweight Swim Goggles (both tinted and clear)
      □ Cat crap antifog for goggles
      □ Disposable earplugs
    □ 2 rolls flagging tape
    □ 3 Surgical masks and small bottle eugenol (oil of cloves) for masking smell of decomposed bodies
    □ Plastic signal mirror
    □ 2 extra pocket waterproof notebooks

□ Armor deerskin unlined gloves for now.
□ Some brass ones from amazon.com.
□ FreeForm SE were my go-to gloves, but now I like the ResQ-Grip textured ones from www.phs-products.com much better; tougher, better grip, can get onto wet hands.
□ I always have a bothy bag with me. For dayhikes by myself it’s a SilBothy 2; if with a small groups, a SilBothy 4, both by Integral Designs; aI lso have Rab 8-10 person Bothy and 12-person one in back of truck for search and rescue or large group trips.

little pieces with a knife, add a half cup of boiling water, then smush and stir the lumps with a spoon, you end up with a bowl of delicious hot cream of wheat with milk in it. Both recommended.

10 TrueGrip lightweight leather-palm gloves used to be my go-to for summer, until I (finally) realized I should have leather not just on the palms, to protect the back of my hands from thorns when going through brush with “jagger bushes” (Pittsburghese for brambles, sticker bushes, whatever you call plants with thorns like greenbrier, multiflora rose, and blackberry). I am trying out a pair of Hand Armor deerskin unlined gloves for now.

11 Suunto MC-2G Global Compass
12 "3"x3" 1:24,000 1 km grid overlay from maptools.com
13 Acme Tornado 635 Pealess whistle, which is orange, light, sturdy, loud, and the old one I have has a brass split ring that, unlike steel ones, is sure to not mess up your compass needle; a newer backup I got had a steel split ring so I ordered some brass ones from amazon.com.
14 Five gallon ziplock plastic bags for TAFs and maps
15 A single dollar bill, folded up in a small plastic bag, for putting next to evidence when taking pictures of it (for scale)
1.5" flat black "tent" webbing strap, with dual-adjustable buckle; load strap for litter carries and for piggyback carries.16

- Left hipbelt pocket (LowePro D-Res 10AW camera pouch)
  - Waterproof notebook and pen
  - Petzl Nao headlight17
  - 2 spare Nao batteries

- Right hipbelt pocket (LowePro D-Res 10AW camera pouch)
  - 2 granola bars
  - tiny binoculars
  - wrist and head sweatbands
  - contacts saline
  - small roll duct tape
  - counting beads:
    - 5 light 1 dark, 5 light 1 dark
    - 10 light on longer string
  - Spare compass/Grid Overlay 18/whistle on lanyard

- Stove: ultralight Evernew heat table stove with 500 mL titanium pot and cover and heat tablets and vegetables and bouillon cubes (good for melting snow or for a hot drink for a cold patient or team member, very small and light)

- Bag of flagging tape

- Daytrip Water Purification Bag19
  - MSR Hyperflow water filter
  - Spare filter element for above
  - MSR Drom-Lite 4L water bag, one with cap that attaches to Hyperflow
  - MSR Drom-Lite 2L water bag with standard cap
  - Adapter/tube that connects above standard cap to my daypack Camelbak

20 chlorine dioxide water purification tablets

- Hiking with dog stuff
  - Sierra Cup for water
  - Folding fabric bowl for food
  - Pouch with leash extension (accessory cord)
  - Clip-on Trash Bag (climbing chalk bag)
  - TheMightyPouch neoprene cellphone/camera case:
    - Canon PowerShot A1400 camera (takes disposable AA lithium cells, so works in cold weather)
    - 2 spare lithium cells for above

- GoreTex Pants, Medium-duty (tend to throw the ultralight pants from Tumi pack into daypack instead)

- Safety Vest, Fluorescent mesh, Mountain Rescue

- Bifocal safety glasses in crush-resistant cases (2 pr)20

- Backpacking Emergency Rope: Edelweiss Discover 8mm x 15m Super Dry Twin Rope, in rescue cloth, new 201421

- I liter water bottles, two22

- Kahtoola Microspikes23 size large

- Acme signaling horn

- Radio Chest Harnesses, by TheMightyPouch,24 2 with spare long-dockie dual-band antenna for handheld radio to fit Wouxun handheld radios

- Camelbak, 2-Liter, clip-on type, empty25

- Winter Stuff:
  - Ski Goggles26
  - Grivel crampons with crampon protectors in crampon bag along with crampon wrenches
  - Complete leather facemask
  - Size XL Feathered Friends Helios hooded down jacket27

- 3 x 3" 1:24,000 km grid overlay from maptools.com

For short tasks or day trips

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16 This is less than half the weight of such a strap in 2" seatbelt webbing and is adequate for the tasks. A double-adjustable buckle means you can keep the buckle in the center of your chest while taping a patient to your back for a piggyback carry.

17 This replaced a Petzl Tikka XP, which replaced Princeton Tek EOS headlamp, which replaced a Petzl Zipka Plus Headlamp, which replaced a Petzl Zipka headlight. I liked the Zipka because it was so light, and bright enough for quick-and-dirty use, but it wasn’t water-resistant at all, the switches tended to corrode over time and required taking the unit apart and cleaning with contact-cleaner and a steel brush. And, the foam pad that kept it from denting your forehead got all sticky and gooey after about a year of use. The Petzl Zipka Plus was a step up: brighter (one more LED, better LEDs), water-resistant, non-corroding switch, non-gooey head pad. But then the Princeton Tec EOS offered a 1-watt Luxeon side-emitting LED, which was much brighter and threw a beam farther. But then Petzl came out with the Tikka XP, which had a 1-watt Luxeon Star, AND was tiltable to various angles, and includes a diffuser that is an integral part of the light and can be drawn across the front to provide a diffuse area light. It also offers a “boost” option which will, for a few seconds, give you a quite bright beam. And, note: all of these lights AAA cells (I use disposable lithium cells from REI), are very small, very light, and all fit in one of these belt pouches with room for over for other things. The Petzl Nao features two LEDs, one with a diffuser, and a built-in light meter that adjusts the light appropriately, a USB-charged Li-ion battery that lasts for a long time, and can also take two disposable AAA lithium cells when the rechargeable battery gives out. Very, very nice, and is now my main headlight for everything. Petzl now offers a variety of headlights with light meters and rechargeable batteries, but only the Nao lasts long enough for caving or prolonged night SAR tasks. I store with the battery disconnected to prevent battery drain (which, when connected, is a significant issue). I used to carry a backup flashlight with headstrap, but the Petzl Nao is so reliable that I only carry the tiny Petzl eLights as backups.

18 3 x 3" 1:24,000 km grid overlay from maptools.com

19 For short tasks or day trips
Light Orange Duffel Stuff: Commonly used technical rescue stuff; sometimes stuff will be on my comfy Camp harness that I use for training instead of in the bags as below.

- **Vertical gear bag**
  - Petzl caving style seat harness
  - Titanium BMS micro-rack
  - Petzl Frog ascending system with extra quick-attach ascender

- **Minimum rescue gear sling bag**
  - Gear Sling (single-length sewed runner) (new 2012)
  - Leather Gloves
  - Half-length sewn runners: 2 (new 2012)
  - Single-length sewn runner: 1 (new 2012)
  - Double-length sewn runners: 2 (new 2012)
  - Prusik loops: 4 (new 2012)
  - Large locking D rings: 3 (large enough to go over litter rails)
  - Pear-shaped locking carabiners: 3 (for Münter hitch)
  - Non-locking carabiners: 2
  - Petzl Rollerclops: 2
  - 20’ 1” webbing (for improvised seat harness) (new 2012)
  - Small bandage scissors on keychain-style retractable Spectra cord
  - Purcell Prusik with locking D-ring and Petzl Basic ascender (new 2007)
  - Titanium Scabrab lowering/rappel device

- **Camp Seat Harness**
  - Aztek Elite Edge Kit in buttpack
    - 1 Rock Exotica Omni AZTEK Elite blue pulley
    - 1 Rock Exotica Omni AZTEK Elite orange pulley
    - 1 Sterling 8mm AZTEK cord with sewn eye
    - 1 Sterling AZTEK ratchets (one blue, one orange)
    - 1 Sterling AZTEK travel restrict
    - 1 Maillon Rapide screw link 7mm
    - 1 AZTEK Pro Bag
    - 1 Kong Tango

- **SMC-PMI Set of Four** prerigged haul system

- **AMRG Personal Wilderness Medical Kit** 3 red “First Aid” bags; see official AMRG kit listing; packed in separate basic black REI daypack for “grab and go” availability; also this pack zips to back of big medical kit/REI travel pack.

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**II. SAR Gear Bag** this is stuff in case I get involved in a many-day search or might want to dig out for a backcountry camp-in; everything in green might go into disaster pack or rolling duffel for disasters

- **Top Section**
  - Color code tape

- **Side Pocket 1**
  - JetBoil stove with fuel inside cup
  - Bag with:
    - Windscreen
    - Base
    - Extra fuel canisters (1 small, 1 large)
    - Titanium cookset (1.4 liter pot and cover/saucepan), potscrubber and detergent; inside:
      - 2 2400 kcal survival rations, one ER bar manufactured 7/18, expires 7/23 and good for 5 years after that and one Mainstay
    - 4 Vitalyte (Gatorade clone) packets
    - Folding cups and plates and bowls and utensils (2 each)
    - Folding bucket
    - Folding wash basin
    - MSR 4 liter water bag
    - Small Aloksak plastic bag with MSR potscrubber
    - Tiny bottle of dish detergent
    - Old pack towel in large net bag for dish-drying

- **Side Pocket 2**
  - **Austere Toilet Kit**
    - in separate large net bag for drying: 1 large and 1 small PackTowel
    - in separate large net bag for drying: washcloth made from piece of pack towel
    - Contacts solution, contacts case, razor, Q-tips, Sea to Summit Travel Soap
    - Pocket tissues
    - Tampon
    - 2 Travel Bath towels, sealed in bags
    - Toothbrush and paste, flossers
    - Comb
    - track shorts
    - CoolMax tank top
    - 2 REI 1-ounce clotheslines (www.rei.com)
    - Sea to Summit 2.5 gallon (10 L) “Pocket Shower” water bag

- **Shirt Bag:**
  - 50 quick-dissolving leaves of soap suitable for shampoo, soap, laundry soap, dishwashing soap; Replaces 30mL Nalgene bottle of shampoo; saves an ounce of weight. Package inside a 3”x5” heavy-duty ziplock plastic bag to protect against water. From REI.
  - No, no, not for me—to sell to desperate women. Sometimes worth their weight in gold—well, they don’t weight very much, do they?

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28 I used to keep this in a bag, now it’s all on the gear loops of a comfortable Camp harness, with the empty bag in the duffel bag.


30 Nonlocking carabiner with pulley integrated into bottom; can use either as a non-locking carabiner or pulley for a haul system.

31 For cutting hair or shirttails out of a rappel device.
II. Miscellaneous Gear Bag (rarely used/spare stuff)40

- Charcoal Vest: HeatPac hypothermia rewarming device with 18 hours of fuel in Pelican box
- Green zip bag with extra fuel and batteries for charcoal vest, and 40 iron type hot packs (Hot-Hands Body & Hand Super Warmer, box of 40), each additionally sealed by me in a heat-seal bag to prolong shelf life. Expire 12/21.

- Spare gear to loan if needed:
  - Small size Pack Towel
  - Old Gore-Tex parka/pants
  - Spare nylon pants (2 pair)
  - Bag with spare gear:
    - 2 wool balaclavas
    - 1 pair wool mittens
    - 2 pair brown fleece gloves
    - pair wool socks and liner socks
    - leather gloves
    - cheap compass and 2 whistles
  - Spare goggles
  - Spare long gaiters
  - Two extra 1 L and two extra 1.5 L Forty Below Bottle Boots (thick winter bottle insulation)

- Blizzard pack disposable sleeping bag
- Pocket Shower (Sea to Summit, also doubles as water bag)
- Repair Stuff (gray bag):
  - Spare set of Aloxak zipper plastic bags
  - 10’ 1” flat black pack webbing
  - Lots of repair hardware including: 2 ladderlocks, 2 triglides, 1 adjustable buckle, 2 D rings, including 2” adjustable buckle and 2” triglides, 1 cordlock
  - 1 Zipper Repair Kit (www.rei.com)
  - Blanket pin
  - Gear Aid Quik Attach Slik Clip Assortment, “one snap lock buckle, one ladder lock buckle and two tri-glide style buckles, all of which can be attached to presewn loops without re-sewing.” (www.rei.com)
  - Salomon Keval Lace Repair kit
  - 1 roll Gear Aid Tenacious Tape
  - 1 50’ length of Kelty reflective tencord
  - 30 feet of black parachute cord
  - 1 5-yard roll duct tape (from rei.com)
  - cable ties:
    - 3” – 2
    - releasable 7” – 2

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35 I wear season-appropriate boots when respond, and also have a pair of season-appropriate boots easily reached behind/below driver’s seat for emergencies when driving around in street shoes; Salomon mid Gore-Tex trail-running shoes and socks and short gaiters for summer, Sorel Conquest boots and the like; will have to see if it works better than the McNett repair kit, above.

36 For summer, I have in this bag my heavy backpacking Limmer boots, which provide excellent support and protection. Peter Limmer and Sons of Intervale, NH (limmercustomboots.com) has been making custom-fitted backpacking boots for almost a hundred years. They are heavy, traditional leather boots, but exquisitely comfortable. I was even able to get Peter to install a set of instep tricounis on my boots. Tricounis are the old metal cleats used on leather soles before Vibram rubber soles were available. When crossing a stream on a log, these bite in better than simple rubber lugs in the instep. But modern boots are so much lighter that I have switched for most summer tasks to Salomon XA 3D Pro boots, which I keep in my house and hop into before going out to search and rescue operation or hike. For a backup, I have an old pair, soles almost but not quite worn out, in the back seat floor of the vehicle.

37 These make standard mountaineering boots toasty warm; only for use with crampons though.

38 Lock and Lock boxes are reasonably sturdy (though I’ve had a few broken by airline baggage handlers even inside baggage), reasonably lightweight, mouse-proof, waterproof, airtight. This size available as part of a set from amazon.com

39 There are good survival bars, and really, really bad survival bars. The ERbar (Sea to Summit, also doubles as water bag) manufactured 6/14, ~30 year shelf life; good for almost 18 hours of fuel in Pelican box

40 Miscellaneous Bag, SAR Gear Bag, Caving Gear Bag, and Technical Rescue Bag are Patagonia boot/duffel bags, circa 1990, which I don’t see in the catalog any more. Uniform size and shape makes packing the back of the truck easier. Each is labeled with a 3x5” laminated tag with the name of the bag on the front, and my name/color code/contact information and a brief contents on the back, attached via a 2” Versalink type keychain put through a brass grommet on the tag and then around a zipper pull; similar tags on the SAR pack, tool kit, etc.

41 From REI or rei.com. The Salomon laces are hard to repair with shroud line (parachute cord) or regular laces. Shoes using them are increasingly more popular. I have a pair.

42 Very light, gets great reviews for permanent field repairs of tents, sleeping bags and the like; will have to see if it works better than the McNett repair kit, above.
- mounting-hole type 10" - 2
- releasable 11" - 2
- eyeglass repair kit with screwdriver and spare screws
- 5 misc. sized needles, in old case for spare mechanical-pencil erasers
IV. Technical Rescue Bag
- **Rope**: 100’ PMI static rope in rope bag
- **Tarp**: for spreading out gear
- **Technical Gear**: about 50 lbs of misc. climbing and technical rescue gear including 50 meter dynamic climbing rope (new 2012), multiple racks, load-releasing hitches (new 2012), carabiners, pulleys, Prusiks (new 2012), webbing (new 2012), misc. short ropes for rigging (new 2012), rope pads, and three deadmen (can use in mud, e.g., in caves, as well as snow)
- **Winter**: three snow pickets go on top

IV. Caving Gear
- **Misc: Caving Gear**
  - Helmet/lights separate in back of vehicle as also used for above-ground rescue, too
  - Top flap, inside:
    - Single AC plug 6-USB charger with 6 USB-A extension cords for charging 6 Petzl Nao batteries at once.
    - Leather gloves for intense ropework
    - 4 sets of 2 AA lithium cells sealed in plastic (backups for Nao headlight)
  - Single Petzl USB AC/car charger, and USB cable
  - Main pocket; in addition to cave pack:
    - Caveralls (custom Cordura with padded knees, seat and ankles) with pockets filled with
      - Gloves
      - Waterproof paper, pen, pencil
      - Small contacts saline (2)
      - Small Nalgene bottle with antacid tablets
      - Caving necklace (quick-release) with
        - Tip cleaner brush
        - Small folding knife
        - Whistle
        - Small compass
        - NiteIze Inova pocket light
      - Fleece helmet liner
      - Leaf bag
      - Malden Powerstretch 100 union suit, wicking underpants and CoolMax fishnet
      - Load-bearing belt
  - Thin side pocket:
    - Nylon dirty-cave-gear bag with mud brush
    - Plastic leaf bags
    - 2 kits with 20 wooden popsicle sticks with Scotchlite tape on top (for marking paths in caves; extras to give to others)
  - Thick side pocket #1; spare gear:
    - Fleece vest/in dry bag
    - 12”x24”x1/4” Ensolite closed cell foam pad (insulation for under lying patient; will fit in bottom of cave pack)
    - ThermaRest inflatable seat (insulation for under sitting or lying patient, or for me; will fit in bottom of cave pack)
    - Spare inner clothing: wicking polyester tops and bottoms, underpants, fishnet Tshirt, socks
    - Spare gloves (3-4 pair)
    - Tiny (4”) screw jack, might be useful for a rescue some century.
    - 4 USB extension cords and Anker AC 6-port quick-charge USB power supply, for Petzl Nao headlight batteries
  - Thick side pocket #2:
    - Boots and socks (old light hiking boots)
    - Strapon knee pads
- **Cave Pack Contents**
  - 500 cc water bottle with duct tape on outside
- Extra food: 3 food bars/in bottle
- Extra clothing: thin fleece sweater, balaclava, neoprene facemask/in dry bag
- Spare batteries in 1 liter Sea to Summit dry bag
  - 3 spare Nao headlight batteries.
  - 4 lithium AA cells individually sealed in plastic
  - 6 lithium AAA cells sealed in pairs in plastic
- Hypothermia kit/in sealed plastic bag:
  - 3 leaf bags
  - candle/melted into Nalgene plastic jar
  - matches/in waterproof case
  - Magnesium metal Firestarter
- ThermaRest NeoAir inflatable seat cushion
- Spare light source: Zebralight H51PW 164-Lumen AA Floody Headlamp with headstrap with battery reversed
- Misc. junk in Nalgene plastic jar:
  - toilet paper
  - cable ties
  - paper clips
  - safety pins
  - large contacts saline
  - Vaseline-packed Photon Light II (to give away if needed)
- Bare-minimum vertical kit
  - sewn double-length nylon webbing runner to use as diaper seat (can be attached to the load-bearing belt for additional security)
  - locking aluminum pear-shaped carabiner
  - basic 2-knot ascending rig
    - sewn seat Prusik
    - sewn foot Prusik
    - sling to attach the foot Prusik to the seat
- Edelweiss Discover 8mm x 15m Super Dry Twin Rope, in rescue coil, new 2014
- First aid kit: seal Everyday Emergency Kit in Sea to Summit 8L UltraSil dry bag in cave pack (except City Bag) and use as first aid kit; if not taking cellphone in cave, can leave out the two backup cellphone batteries in large bag to save weight.
- Swiss Army Knife and mini Leatherman/on lanyard
- 30' parachute cord (shroud line)
- “Bubblegum” minimalist sound-powered field phones:
  - 2.
- Field phone wire repair kit, minimalist type
- Roll of flagging tape

43 Filled in summer, filled to within 1” of top in winter to leave room for freezing without exploding the bottle.
44 This was a really cool idea by ThermaRest that never worked very well and has been discontinued. It's an incredibly small and light inflatable air mattress for sitting and keeping your butt dry and warm. But it’s like trying to sit on a balloon. I finally gave up on it for hiking and SAR and replaced it with a standard ThermaRest sit pad. But for emergency use when caving, to provide some insulation under someone, it’s great.
45 Suitable for non-lead-climbing belays per the company, can be used as a tagline for a litter (tying to both ends gives you nearly 7m of tagline on both ends), or in a dire emergency, as a static rope. Can in a pinch, belay the litter a bit using a Münter hitch on the locking carabiner attached to the load-bearing belt instead of a hip belay, which is hard with such thin rope. Certainly not a technique for belaying a lead-climber but quite useful for short belays in horizontal cave rescue. Comes in 30m length, I cut in half. In a rescue coil, it’s supple enough to make into a rug-shape to use as an insulating sit-pad.

- 20 wooden popsicle sticks with Scotchlite tape on top and my color code below this (for marking paths in caves)
- Two Sharpies, in heavy duty zipper plastic bag, for marking on flagging tape.

46 Most of my rolls of flagging tape are drilled through the roll, with a cable keychain through the hole. This prevents massive unrolling and allows you to attach the roll to a carabiner. I put the roll in a vise, then drill a ¼” hole about ⅛” from the edge of the roll, using a brad-point drill on slow speed, from the circumference into the center of the roll. Before drilling, I put a dowel or other small scrap wood through the center of the roll, to prevent the drill bit from simply pushing in the cardboard in the center of the roll. The keychain is a Lucky Line Flex-o-loc (which also makes a great keychain). ~$3 each, reusable.
V. Disaster Gear items in **red** must be added to gear on deployment; note that some “add from SAR pack” items may be in daypack or green duffel in back of truck; items in **green** stay in disaster duffel and for those used for backpacking, such as the big water purification bag, I pull out for the backpacking trip. I select disaster gear based on the expected austerity of deployment, for instance, if really austere, I include the multifuel stove, big bag of solar chargers out of back of vehicle, and big water purification bag, but if not so austere, I leave them out to save space and weight.

- Biggest Rolling Duffel (from basement across from freezer)
  - Large Outer Pocket:
    - Nalgene bottle with one load’s worth dry laundry detergent (and room for more if can scrounge)
    - Building escape kit: 70’ of 7 mm nylon rope, in rescue coil, pear-shaped locking carabiner for Münter hitch rappel, and 10’ 1” webbing for diaper seat, and center-punch for shattering windows
  - Outdoor Research Clear Pocket #3 zipper bag:
    - from black bag
      - Medical headlight and spare AA lithium cells
      - Lightweight stethoscope
      - Stethoscope holder
      - Pocket otoscope otoscope, AA lithium cells and tube of specula
      - Steel ear curette
      - BroseMV pediatric resuscitation measuring tape
      - Laminated pocket reference cards
      - Miltec bandage scissors
      - Aligator forceps in protective aluminum tube
      - Kelly clamps
      - Splinter forceps
      - Needlepoint ViseGrips
      - McGill forceps
      - Ear/nose foreign body remover (instrument with L hook on one end, for beads, and spoon on other end)
      - Ring cutter
      - Nasal speculum
      - Silver nitrate sticks
      - Hard sunglasses case with ***Olympic safety glasses*** with bifocal 2.5x magnifiers at bottom of lenses (much lighter than my real loupes, disposable)
      - Lightweight nylon dirty-clothes bag (from overnight bag in master bedroom closet)
    - Straps for strapping pack to rolling duffel
    - Multi-luggage cable lock
    - 1D case for hanging around neck and one for arm
    - Rental-car laptop mount (custom built)

- Cellphone charger base and cord, and separate spare-battery charger, with 3:1 AC adapter and AC cheater (2-prong > 3-prong) (from green overnight bag in master bedroom closet)

- Sea to Summit Pocket Shower

- Eating and drying clothes: Large Alocsak plastic bag with
  - Lexan knife/fork/spoon/soupspoon
  - Orikaso folding cup, plate, bowl
  - small mesh bag with small bottle of dishwashing soap and scrubber
  - Platypus ultralight collapsible 1 liter water bottle (for mixing Gatorade)
  - 10 lightweight clothespins (N.B.: tiny clothesline/pins also found in regular toilet kit and Austere Toilet Kit)

- Cooking: MSR multi-fuel stove, new unused fuel bottles, gas siphon

- Big trip (backpacking/disaster) Water Purification Bag:
  - Outdoor Research Portable Pocket #2 with tiny compressed Lightload towel and tiny bottle of Windex to clean windshield: add cellphone windshield mount and cellphone dual car charge with coiled cables (from glove compartment of smaller vehicle)
  - In Alocsak bag:
    - 60 mL Nalgene bottle of sunblock
    - 60 mL Nalgene bottle of insect repellent
    - 60 mL Nalgene bottle of waterless hand cleaner and two tiny refillable bottles to refill

- Sea to Summit Pocket Shower

47 I used to use a High Sierra (highsierrasport.com) AT202 36” Drop-Bottom Wheeled Duffel with Backpack Straps, purchased from Cabela’s (www.cabelas.com). However, it has broken in so many different ways that I ended up keeping my disaster gear in a Tumi high-end rolling duffel. Very expensive, but I have had Tumi rolling bags that have lasted 30 years of hard use several times a year. Tumi stuff is bombproof.

48 Zebralight one AA lithium headlight with homemade adapter to get it between my eyes so I can see into mouth, ears, nose, and the like.

49 I have tried all sorts of things for marking back windows of cars in a convoy. White dab-on shoe polish (worked, but now you can only get dab-on shoe “whitener” which I found out was useless); soap, 3M vinyl tape; and most recently markers specifically made for marking glass for decorations, available at craft stores or amazon.com. There are many brands; of the brand I got, the blue was the most visible. If you can write backwards, you can write on the inside of the back window to protect it from rain. The reflective tape is much harder to remove, but may be useful for driving during a hurricane (which I have done several times; search amazon.com for “conspicuity tape”).

50 For weighing packs prior to rotor-wing transport.

51 Backup for the MiOX unit/filter, but more for passing out to others. Weighs basically nothing (5 grams/packet).

52 This clever “origami” style folding cup and dish/bowl fold flat for storage and are very light and easy to clean. About $5 each.

53 It is permissible to carry a stove on commercial aircraft provided the fuel bottle is unused; can siphon gas from a vehicle, and then dispose of the fuel bottle prior to the flight back.

54 For larger teams or backpacking trips

For larger teams or backpacking trips
55 Liters = 3050 cubic inches, 1 lb 15 ounces, $150; foam pad in pack can be removed and used as additional insulation under ThermaRest pad for in winter.

56 For going out from the Base of Operations (BOO) on a Strike Team.

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**MSR SweetWater Microfilter**

**MSR SweetWater Siltsstopper prefilter**

**Platypus Filter Link to attach Microfilter to Platypus 2 liter collapsible water bottle**

**6L MSR Drom-Lite water bag**

**Platypus 2 liter collapsible water bottle (this and all above available from www.rei.com)**

**Potable Aqua Pure Electrolytic Water Purifier**

**MSR MiOx unit with spare salt and spare set of batteries (old, backup)**

**Water Purification Accessory Bag (smaller):**
- spare salt (for MSR MiOx water purification device)
- 4 spare D123 batteries (for MSR MiOx water purification device)
- spare filter for MSR SweetWater Siltsstopper prefilter

**Disaster Field Pack (Golite Jam Pack**), with emptied external CamelBak 3 liter Lobo Hydration Pack: both go flat into large rolling duffel; can use to separate gear into two items for weight limitations if needed.\(^{16}\)

**Plastic clipboard with paper storage with paper,**

**Yellow Packing Cube:** uniform blouses (2)/trousers (3)

**Blue Packing Cube:** Semi-uniform shorts (2) (summer only)/DMAT PA-1 uniform T-shirts (4) including black/navy CoolMax fishnets (4) to wear under uniform T-shirts

**Military Boots**

Extra uniform blouse and pants: add to packing cubes only for longer deployments

Backup GoreTex jacket (winter only)

Black military boots (from small vehicle; insulated for winter; non-insulated for other seasons)

**Clothing:** appropriate civilian and outer clothes for season and area, khaki Tilley hat (from vehicle)

**Electronics:** Alosak large plastic bag with multiple old, heavy but still functional solar chargers (from back of vehicle)

**From green overnight bag in bedroom closet:**

**Side pocket:**
- Folding drinking cup
- 1>3 AC Power outlet strip with 1 USB port (Monitor brand)
- Powerstrip\(^{**}^{1}\) 1>2 adapter with short extension cord, with grounded>non-grounded AC adapter
- 6” AC extension cord
- 2 USB A>B extension cords (for using cellphone while plugged in charging)
- 2 Quickcharge 3.0 AC USB adapters
- 1 Seneo Quickcharge 3.0 wireless charging stand for cellphone with cord and AC adapter
- 1 USB A > USB C 3” charging cord
- 1 USB A > USB C 6” charging cord
- 1 USB A > micro USB 3” charging cord

**1 USB A > micro USB 6” charging cord**

**Toilet kit** (includes two Sea to Summit lightweight clotheslines)

**Shoe dryers (AC+12VDC)**

**Everyday shoes** (Summer: Keen water shoes, Fall and Spring lowtop leather trail-running shoes, Winter: midtop Salomon trail-running shoes/boots) (from bedroom/bedroom closet)

**Sorel winter boots\(^{57}\)** (winter only) (from behind driver’s seat in truck)

Alosak plastic bag with (add from SAR Pack)
- Nalgene bottle (60 mL) with sunscreen
- Nalgene bottle (30 mL) with insect repellent
- Two hipbelt detachable pockets (add from daypack or green duffel)

Austere Toilet Kit (add from daypack or green duffel)

**WEMSI Personal Medical Kits** (three red bags in black REI duffey from back of truck)

**Shelter:** Small tent Big Agnes Copper Spur UL1 or Hennessy hammock\(^{58}\) (from back of truck)

**Shelter:** Bothy 8-10 emergency tent (from back of truck)

**Sleeping:** ThermaRest NeoAir XT therm sleeping pad (from back of truck)

**Sleeping:** Sleeping Bag stuffsack with liners and stuffable pillow (down booties and overboots) (from back of truck)

**Food (may add two additional Lock and Lock boxes of food from SAR Gear Bag to make 3 days’ worth)**

**Food for Heating/Cooking** (from SAR Gear Bag)

**No-cook food,** in 1.9L Lock and Lock box (from SAR Pack)

**Freeze-Dried Food:** 2.6L Lock and Lock box\(^{59}\) with 3 freeze-dried compressed ProPak Mountain House or dinners (“Serves 2” – yeah, if you’re not hungry)

**Extended Food:** 2.6L Lock and Lock box
- 6 1-liter packets of Gatorade mix
- 2 4-oz. packets of almonds, sealed (with commercial food bags sealed with a commercial heat-sealer, with oxygen-excluder packets in each)
- 6 oz. Stoned Wheat Thins sealed in bag

55 50 liter = 3050 cubic inches, 1 lb 15 ounces, $150; foam pad in pack can be removed and used as additional insulation under ThermaRest pad for in winter.

56 For going out from the Base of Operations (BOO) on a Strike Team.

57 I recently replaced my old Sorel boots that used wool felt liners with boots lined with Thinsulate, specifically the Sorel Conquest boots; they have a built-in gaiter but best practice is to wear long gaiters over them for deep snow, so along with them I have a pair of size large (I usually use medium size gaiters) Outdoor Research Crocodile gaiters; also the boots are fitted with thicker socks and have two pair of them in the boots.

58 I have found the small tent more useful; hard to find a place to use the hammock, though I did sleep in it strung between two pillars of an abandoned hospital after hurricane Katrina; but the tent I’ve set up in the convention center exhibit hall in San Juan, Puerto Rico after hurricane Maria for some privacy (and shelter when the roof leaked), and in a church kindergarten room after hurricane Florence.

59 Available at Target stores; cheap, sturdy enough to be crush resistant (though not so much as an Otter or Pelican box, only a fraction of the weight and bulk), waterproof and airtight.
- 1 lb (6 blocks) of Mainstay compressed emergency food rations

- Travel waist pack:
  - Passport, medical license, DEA license, EM Board certificate
  - Small (500 mL) Platypus collapsable water bottle: (carry empty and fill from water fountain once through security at airport)
  - ThermaRest inflatable “neck” pillow with eyeshades and earplugs
  - Noise-canceling earbuds
  - Bandannas (2), minibiners (2), elastic Velcro straps for head to keep head from flopping around when sleeping sitting up in the back of a C-130
  - Food: several food bars and some nuts
  - Small book
  - Toilet paper in Ziploc bag
  - 2 travel bath towels, sealed in bags
  - Toothpaste and toothbrush
  - Waterproof notebook and pen

- 24-hour “ready” pack: (fluids to remove for air travel if not TSA Precheck highlighted); use Tumi pack (Alpha Tumi T-Pass™ Business Class Briefpack style: 26578), add to it/leave in it:
  - **Back Top Compartment:**
    - Logitech wireless laptop mouse
    - Micro-USB-USB-A charging cord for mouse
    - Sunglasses in case
    - Medical Reference Cards
    - Lens wipes
  - **Back Bottom (small) Compartment:**
    - Spare multipurpose contacts solution: 2 3 mL dropper bottles, 1 8 mL dropper bottle
    - 2 spare pens
    - 2 spare combs
    - Hipbelt and sternum strap for pack
    - Bookmarks
  - **Back Bottom (big) Compartment:**
    - Lenovo X1 Carbon AC power “brick” adapter, AC 3-prong>2-prong cheater, USB-C-USB-C cord, and USB-C extension cord with USB-C male-male adapter so can also be used by itself as a backup power cord (lighter and smaller than an AC extension cord)
    - Powerstripsaver and AC cheater adapter 3-prong > 2-prong
    - 1 > 3 AC adapter, 3-prong
    - **Glasses case** (Oakley Vault small) with
      - Glasses
      - Contacts case
      - Contacts solution 8 mL dropper bottle
      - Glasses keeper cord
      - Spare pair of contact lenses
      - Spare car key on lanyard attached inside compartment
      - In small pockets inside compartment:
  - **Pocket 1:**
    - Checkbook
    - Spare supply of business cards
    - Pocket 2:
      - Nail file
      - Highlighter
      - Spare pen (Lamy Safari pen)
      - Pen refill
      - Sharpies (1 each chisel tip, fine/extra fine)
      - Mechanical pencil
    - Cheap give-away ballpoint pen

- Outside inside-pack “laptop” pouch: laptop, currently Lenovo X1 Carbon 6th generation

- Inside-pack “laptop” pouch
  - Avery Translucent Document Wallet, clear, #72278, ¼”x9x1 1/2” with 10 pieces of graph paper and binder clip to use as improvised clipboard; lighter and thinner than real clipboard; add travel documents
  - Grey pouch with
    - Personal meds: Pulmicort, Atravent and albuterol inhalers, antihistamine nasal spray, steroid nasal spray, cardboard inhaler spacer
    - Small roll of color code tape
    - Bit of toilet paper in small plastic bag
    - Sweatband
    - Collapsible backscratcher
    - ¾” flat black nylon webbing straps with Fastex buckles (for attaching things to lash patches sewed to front of Tumi pack) (2 sets, long and short)
    - Aloksak 11 x 13.75” waterproof plastic bag for laptop (loksak.com)
  - Heavy-duty Aloksac plastic ziplock plastic bag sized to fit wallet
  - Sil-nylon pack raincover (XS, www.granitegear.com)
  - Spare TheMightyPouch neoprene cell phone case
  - Ultralight waterproof/breathable parka (Outdoor Research Helium II jacket; medium for warm weather, large for cold weather)
  - Ultralight waterproof/breathable pants (Outdoor Research Helium pants)
  - Small Mesh bag travel emergency overnight kit: Tiny MSR Packtowl Personal, Sea to Summit Pocket Body Wash, CoolMax underpants, light CoolMax fishnet T-shirt, pr. wool socks. (Already have toothbrush, toothpaste, contacts solution and combs in other pockets of pack.)

- Disaster Toolkit:
  - Screwdrivers and sockets:
  - Husky 8-in-1 Precision Screwdriver Set

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61 Used to carry a zip waterproof case, but now my Samsung phone is waterproof so the neoprene case is all I need; usually one on my belt, but this is a spare in case it breaks.

62 50 quick-dissolving leaves of soap suitable for shampoo, soap, laundry soap, dishwashing soap; Replaces 30mL Nalgene bottle of shampoo; saves an ounce of weight. Package inside a 3”x5” heavy-duty ziplock plastic bag to protect against water.

63 At under a pound, this tool set has small and large screwdrivers including Torx and Allen, and ¼”-3/4” and 7-19mm sockets with a ratchet driver.

64 Overall lighter and smaller than similar offerings from Sears and Kronus; approx. 1.5 ounce. With following bits, some from a separate 8-in-1 Torx version.

Keith's SAR/Disaster Checklist Page 11 of 20
- Screwdriver/socket bit set and driver
- Lutz 2-in-1 Phillips #1 and 5-6 (3/16") slotted screwdriver
- Eyeglass Repair Kit (tiny screwdriver and screws)
- Small Channel-lock pliers
- Leatherman Squirt E4 electronics tool (with wire stripper, with knife broken off to pass TSA security for flying)
- Radio Shack contact cleaner pen
- Radio Shack pocket digital multimeter
- Lightweight magnifiers: Model CO5: 2.5x 8” focal distance, from Donegan Optical Company
- cable ties:
  - 4 - 2”
  - 2 – 4”
  - 2 – 8” (with mounting hole at end)
  - 2 – 10”
  - 2 – 15.5” releasable
- Self-drilling screws:
  - 4 - 12-14x1”
  - 4 - 10-16x1.5”
- 4 tiny strips Radio Shack easy-melt solder
- Miniature sewing kit (1 ounce)
- 2 – tampons, in Aloksak plastic bag
- 2 safety pins
- Right side compartment: pouch with
  - Various Hospital IDs and clip for FEMA/DMAT IDs (IDs in wallet)
  - GUM Folding Travel Toothbrush and [small toothpaste](https://www.gum.com/)
  - Grey “computer” pouch with
    - 65W Lenovo DC (car) power adapter for X1 Carbon laptop
  - Rayovac Battery Operated Charger (will recharge cellphone from 4 AA cells)
  - 4 AA disposable lithium cells
  - 1/4 of a microfiber lens cleaning towel; for cleaning glasses, camera, laptop
  - tiny [Windex](https://www.windex.com/) bottle for cleaning laptop screen
  - 1 3mL bottle of dried habanero pepper (for culinary emergencies, especially in England or Wales)
  - USB-C > VGA + HDMI adapter for giving presentations
  - USB A to Ethernet RJ-45 Adapter
  - Small bag with small stuff:
    - micro-USB to USB A adapter (for using USB key with phone)
    - RoverWay Qualcomm QuickCharge 3.0 Dual Mobile USB-A Charger
    - 2 USB-C to USB A adapters (for using USB key with phone or USB-C ports on laptop)
    - 2 USB-A to USB-C adapters
    - 16 GB thumb drive for laptop backup (also keep 16 GB USB keys on keychain)
    - radio Shack pocket digital multimeter
    - micro-mini-standard SD card adapter set
    - micro-USB 1 -> 2 adapter
    - 2 - AC-USB power adapters (Fonken Qualcomm QuickCharge 3.0)
    - 1 – white 4’ USB-A to USB-C charging cable
    - 1 – white 4’ USB-A to micro USB charging cable
    - 1 – black 5’ USB-C to USB-C extension cable
    - 2 – black 6” USB-C to USB-C charging cables
    - 1 – Chafon Multi USB Charger Cable (iPhone, micro-USB (2), mini-USB, USB-C)
- Left side compartment: with radio/cellphone equipment:
  - Field-programmable commercial/amateur handheld VHF/UHF radio (Wouxun KG-UV6D) with attached AA cell battery pack
  - extra antennas
  - 12 disposable lithium A cells
  - extra empty 12-cell AA case (can usually buy and fill with AA cells locally)
  - Bag with:
    - auto power adapter
    - car side-window clip-on external auto antenna SMA mount
- Main Compartment
  - [Everyday Emergency Kit](https://www.conovers.org/ftp/Everyday-Emergency-Kit.pdf) (move EAK back包 to outside to make more room for stuff inside if needed)
  - Toothpaste and Toothpaste
  - Spare small sil-nylon stuffsack (for gloves and hat and sweater so they don’t get lost, or for strapping them, in the bag, to the outside of the pack when needed)
  - BkBox SW solar charger (very light, no fancy features, just folding solar panels with a USB socket)
  - Luggage tag with my business card to put on outside if need to
VII. Overnight Travel Bag (kept in bedroom closet)

- Side pocket:
  - Laptop sunscreen
  - Folding drinking cup
  - 1>3 AC Power outlet strip
  - Powerstrip saver 1>2 adapter with short extension cord, with grounded>non-grounded AC adapter
  - 6’ AC extension cord
  - 2 – 6’ USB-A to USB-A extension cables
  - 2 – 5” USB-a to micro-USB cables
  - 2 – 4’ USB-A to micro-USB cables
  - 2 – 3” short USB-A to micro-USB cables
  - 2 – 4’ USB-A to USB-C cables
  - 2 – Fonken Qualcomm Quickcharge 3.0 AC charger blocks
  - Seneo wireless charging base for cellphone

- Toilet kit
- Shoe dryers (AC+12VDC)
- Enough old clothing for 2-3 days, including flipflops and spare shoes, always kept packed

VIII. Main Response Vehicle Gear (Shingo Shigeo: 2011 Toyota Land Cruiser. 72 Items in truck, or on garage shelves. Things in green might go into disaster pack/duffel for disasters; add items in red)

- Sunglasses compartment (up high)
  - Bottle of Tums Smoothies
  - Dropper bottle of contacts solution

- On driver’s visor:
  - Waterproof pocket notebook
  - Ballpoint pens

- On passenger visor:
  - Spare sunglasses
  - Headlight mounted for use as lap spotlight (demountable for use as medical headlight: can place light between eyes for seeing into noses, ears, other cavities)

- Teaching Company podcasts on a USB key (for those long drives – best way to stay awake: www.thegreatcourses.com)

- Windshield cellphone mount

- VHF/UHF/ham mobile radio (Anytone AT-5888UV, which is a Part 90 Type-Accepted Chinese clone of the Yaesu FT-7800 or perhaps 8800) (sunglasses usually hanging here)

- Glove compartment
  - Vehicle manuals, registration, insurance etc.
  - Paper towels
  - Microfiber cloth for cleaning inside windshield
  - Kleenex
  - Spare dental flossers to restock ash tray
  - Driving gloves

- In door pockets:
  - Misc maps (including spare highway maps to give away)
  - Copper ice scrapers (2)
  - Boot brushes, each stuck into a heavy-duty 3”x5” zip lock plastic bag73
  - 750 mL water bottle in each door

- Homemade dashboard laptop mount beside seat (transfer between cars as needed, both cars have mounting clips for it)

- Beside/Outside Seats:
  - Large umbrella
  - Regular umbrella

- Laptop sunscreen (usually to the left of the front passenger seat)

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72 Vehicle used to be a 1988 Range Rover known as Nigel Braithwaite Conover, but he passed on in 2011 and I got a new vehicle, named Shingo Shigeo (lastname, firstname in the Japanese fashion) after a Japanese engineer who was primarily responsible for bringing Toyota methods to the US. Adding an ARB bar and 9000-lb Warn winch on the front, extra offroad lights on the ARB bar, two batteries with an isolator, a Thule Helium bike rack on the back and stock roof rack with Thule Surf Pads for carrying a Stokes Litter.

73 I have tried about ten different brushes for cleaning boots and their lug soles. One clearly stands out as superior. It’s the O Cedar 150092/357 Tile & Grout Brush. They are more expensive than the alternatives but worth every penny. The brush head is narrow, allowing one to clean between lugs on the sole. The bristles are quite thick and stiff, good for getting stuff off the outside of the boot. The handle is comfortable in the hand. They are quite light. Highly recommended.
**Console compartment** (NB: still reorganizing years after got new truck):
- Top section (Land Cruiser has a 2-section compartment, the bottom of which doubles as a powered refrigerator):
  - Petzl Zipka headlight
  - spare waterproof notebook
  - carwash card
  - 6’ measuring tape
  - 1 – Chafon Multi USB Charger Cable (iPhone, micro-USB (2), mini-USB, USB-C)
- Inverter to power laptop (200W Whistler)
- Velcroed to inside of top lid
  - Tire gauge
  - Rack keys
  - Utility scissors (Fiskars serrated kitchen scissors)
- Left Front
  - Hand sanitizer
  - 3 Gojo hand cleaner towels, individual packets
  - Petzl e+light minimal emergency headlight with two spare batteries (backup to the Zipka)
- Left Middle
  - Chewable Pepcid tablets
  - Hair rubber bands
- Left Back
  - Monocular
  - Box with 12 spare AAA cells
  - Box with 12 spare AA cells
  - roll of quarters (for tolls)
  - Petzl Nao Headlamp USB Battery Charger (both cigarette-lighter plug and AC plug) with USB extension cord
  - battery tester for AA cells etc.
- Right Front
  - Reflective Mountain Rescue safety vest
- Right Middle
  - Glass signal mirror
  - 4 pair nitrile exam gloves
  - CPR shield
  - Antenna cap
  - Small hearing protectors (earplugs)
- Right Back
  - Smith knife sharpener
  - Swisstool “Leatherman” tool
  - Swisschamp swiss army knife
  - Supertape
  - Small roll duct tape
  - small reversible screwdriver
  - Sharpie marking pen
  - Type 13 Anti-Seize (for antenna mounts, etc.)
  - Chainmate 48” survival saw

**Hanging Clothes**/etc. (hanging on L back door “Oh Jesus” handle or nearby):
- Daypack (Marmot Kompressor Summit)
- Tilley hat (on seat) (add to Tumi Pack for disasters)
- GoreTex AMRG ASRC uniform parka (with balaclava and gloves in pockets; heavy-duty, heavy, many-pocketed AMRG uniform parka with standard ASRC patches)
- Best GoreTex non-uniform parka (Marmot Glenmore) with hat, facemask and gloves over heavy-duty GoreTex Arcteryx rain paints with room for layering underneath
- ASRC uniform fleece vest over Powerstretch fleece uniform pullover (LL Bean) over fleece stretch tights (Lowe)
- Thick fleece uniform jacket (Lowe) over Softshell uniform jacket (Cloudveil Serendipity) with hat, facemask and winter gloves
- Primaloft ASRC uniform vest (Cloudveil Enclosure)
- Western Mountaineering expedition uniform down parka and pants and mittens (for standing around for long periods in cold weather)
- ASRC uniform shirts:
  - Duluth Trading Co. uniform ripstop longsleeve shirt
  - Short-sleeve cotton shirt
  - Long-Sleeve lightweight polyester fleec jacket
- Coat hanger with loop bungee cord holding the following on it:
  - 2 rolls 3M duct tape
  - 4 rolls plastic surveyor’s tape
  - 2 neck lanyard/ID holders for summer use
  - Parachute cord
  - Safe necklace of soft 3/8” rope (tied with single barrel knot) with 20 clothespins with 2’ or pink flagging tape tied onto each, for training trailing dogs.
  - 3 pair of winter mittens, two pair with liner gloves (medium size with silk liners for normal use, large size with thicker liners for really cold conditions), with an unopened handwarmer hot pack in the back pocket of each one.
- DMAT/SAR base lumbar pack

**Behind seats** hanging from headrest:
- Inflatable Travel Pillows (2; for naps along the road)
- Trash bags

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74 For removing blowdowns from a road during a disaster or SAR operation. A poor substitute for a real chainsaw, but consider it weighs and bulk less than a tenth of a chainsaw, requires no gas, and will eventually get the job done.

75 I found I use one of my buttacks ( with its Everyday Emergency Kit) and my daypack for enough short SAR tasks that they always are in the back of the vehicle.

76 The Mountainsmith Cairn model is big enough to fit both the Everyday Emergency Kit small buttack (which is almost always with me) and a laptop computer along with a few other things. Handy for carrying at a base somewhere – especially when you don’t want to leave your laptop laying about. Yes, you could use a daypack, but a lumbar pack is a lot easier to manage when you’re taking it off and putting it on over and over. Also, the lumbar pack with the Everyday Emergency Kit and a couple of other items from the SAR pack makes a dandy pack for a short SAR task in warm weather.
30 SMART triage tags for mass casualty incidents, with sharpie for marking on them
5 pairs of mitten/glove handwarmer hot packs
Lumbar pack rain-cover
Aloksak 11 x 13.75” waterproof plastic bag for laptop (aloksak.com; for laptop computer when it’s raining)
big goggles
large folding hearing protectors
multiple pairs of summer and winter leather work gloves clipped to strap with minibiners
small bottle of waterless handcleaner
Two bags of small mitten-style disposable handwarmers
PolarWrap sport rebreath flap
Terra Nova Bothy 2 and Bothy 4 emergency shelters
room for 2 water bottles full of water in side pockets, and one bottle full of water in separate belt pouch (water bottles in all 4 doors of vehicle)
Large stuffsack to throw pack contents into when using for SAR tasks
Net bag of small old/spare headlights (10 as of last count) with box of 12 AA alkalines and box of 12 AAA alkalines and a small, self-powered Sinometer battery tester.
Boots (sort of under back of driver’s seat)
Summer: Salomon XA Pro 3D GTX mid light hiking boots with socks and high gaiters.77
Winter: Sorel Conquest insulated boots with two pairs of very thick mountaineering socks and two pairs of liner socks and extra-large gaiters they require

Back of truck (more or less top to bottom, left to right, closest to farthest from you):
Above/beside left 3rd row seat:
Tire Chains (cable type) with added ~4x5’ Tyvek tarp (for lying in the snow or mud changing tire chains)
Sharps disposal box
Bag of reflective Mountain Rescue safety vests
Orange safety cone with blinking light (padded to not rattle against side window with zip lock bags of leaf bags)
Helinox folding chairs, 3
Bothy Bag: Orange Rab 8-10 person bothy bag
Above/bungeed to right 3rd row seat:
100’ ½” static PMI rope, in rope bag/edge protector
2 MPOWERD Luci Lux Inflatable Solar Lanterns (on side of rope bag, face towards window to keep charged)
Spare high-gain 2m/VHF antenna (used mostly when vehicle stationary)
Ice axe
Above army blankets:
Squeegee/window scrubber

Canvas grocery bags/cotton produce bags
Snow brush/scrapper
Army blankets (2) to cover everything and to use for packaging as needed
Top Layer (more or less L to R and front to back; graphic of packing available at http://conovers.org/ftp/truck-back.pdf)
behind/beside left 3rd row seat, stack of stuff in left corner (top to bottom):
Helmet with 2 lights79
Combat Lifesaver Bag Trauma Kit (Google Combat Lifesaver Bag for contents)
Attached: (two) SAM Pelvic Sling II (compression binder for pelvic fractures)
4 purple VHF/UHF ham/commercial handheld radio bags (3 stocked with a Wouxun KG-UV6D and the fourth with yellow tape for the radio in my Tumi pack)79
Front Pouch:
Instruction manual
Small laminated crib sheet
Spare rechargeable battery
AA cell case
2 sets of 5 alkaline AA cells
Long whip antenna
Extendable whip antenna
(4 parts: SMA-BNC connector, base, main extendable whip, alternate duckie for base)
Inside Net Pouch:
Cloning cable
Programming cable
Headset
Wrist strap
Reverse-SMA to SO-239 adapter (connects the handheld to a base antenna with a big plug)
Main Pouch:
Wouxun KG-UV6D radio
Rechargeable battery
Flexible Antenna
Extendable Whip Antenna
Drop-in charger base
AC adapter for charger
DC adapter for charger
DC battery eliminator
Speaker–mike
Windshield mount
Window antenna mount

Spare high-gain 2m/VHF antenna (used mostly when vehicle stationary)

78 Petzl Elios. Used to have a leaf bag and fleece helmet liner inside my old helmet, but the Elios, which is superior in many ways to my old Ecrin Roc, has no room, so they now live in the pockets of my caveralls. Have a Petzl Nao headset (see footnote under SAR Pack belt pouch) and backup of Fenix E11 single AA cell 105 lumen LED light fixed to helmet with cable ties through the holes;
79 Each in bag with accessories, also one bag of accessories to match the one handheld I keep in the Tumi pack (that one also has a Jetstream FTFR1 monitor that will receive and display the frequency and PL tone for a radio transmitting close by, for in-field programming of radios to match other radios with frequencies known to users only as “Channel 2” and the like)

77 These are my everyday dayhiking, light backpacking and easy SAR task boots.
People with SAR dogs throw these over their vehicles, with the back open. I prefer this brand over all the others I’ve tried. Fit better, sturdier.

Grommets on the edges to provide a cooler shady area. They allow breezes to come through but reflect sunlight. Not bad to throw over a tent to keep it cooler in the summer, or even simply to put up as a tarp (has grommets on the edges) to provide a cooler shady area.

Pile of document stuff on top of toolkit:
- **Electronics:** Alocsac large plastic bag with multiple old, heavy but still functional solar chargers.
- **Storage clipboard** with ASRC meeting sign-in sheets
- “Micro Opskit”: Blue plastic clipboard with storage full of SAR forms enough to get started and send out some reflex tasks:
  - Complete set of PSARC forms packet except for the Task Assignment Form, with extra sign-in forms, enough for one shift, on Rite-in-the-Rain paper
  - Latest version of my own Task Assignment Forms. Two-part “NCR” forms, top (white) copy water-resistant Rite-in-the-Rain coated, yellow copy underneath not water-resistant, 10
  - Some graph paper
  - Three pens
  - Map grid overlay
  - Bundle of six low-profile clipboards (for forms for sign-in etc. for organizing a search) bound with a thick rubber band
- Set of clear plastic envelopes:
  - Gridded maps, both park and topo, of nearby state parks with common search and rescue calls, and
  - A selection of my medical handouts for giving to those with common illnesses
- Copy of Lost Person Behavior book
- Plastic bag of with plastic folding place setting and knife, fork and spoon (on top of tool kit)
- Plastic bag of documents (on top of tool kit)
  - Copy of this document
  - Map of gear in back of truck
  - Contents for trauma kit

Under blankets but on top of everything else:
- **Windshield sunscreen**
- **Cool Puppy Alumite Shade cloth panel, 7x12’**
- **Ski poles** or **walking poles** (same poles with different baskets; with ponytail-style rubber bands to use as tracking stick)
- **MSR snowshoes**
- **Hi-Lift 48” jack** with attachments and instructions
- **Large base** for Hi-Lift Jack
- **Hopkins Subzero 12501 Traction Mat, 2 pack**
- Right next to the back liftgate:
  - **Large Medical Pack** (REI travel pack; not currently indexed, but lots of medical stuff, including an example of a wilderness drug kit with expired drugs; extends from top to bottom layer)
  - Big Agnes Copper Spur UL1 one-person **tent**
  - Hennessy Hyperlight Zip Hammock with extra screw-eyes to mount on buildings, Kelty Triptease Lightline (www.kelty.com) as high-visibility replacement for rainfly pullouts, and added Lazr Hi-Vis titanium tent stakes from Bozeman Mountain Works (www.backpackinglight.com)
  - **Sleeping bag stuffsack**
    - Sleeping bag (3 season or winter: Western Mountaineering winter down bag)
    - Polyester liner
    - Silk liner
    - SOL Escape Bivy
    - ThermaRest Stuffable pillow
    - Down booties
    - Overboots for staggering around in deep snow in down booties
    - **ThermaRest NeoAir XTherm** inflatable pad in stuffsack with repair kit in bottom of stuffsack

80 I prefer this brand over all the others I’ve tried. Fit better, sturdier.
81 People with SAR dogs throw these over their vehicles, with the back open. They allow breezes to come through but reflect sunlight. Not bad to throw over a tent to keep it cooler in the summer, or even simply to put up as a tarp (has grommets on the edges) to provide a cooler shady area.
them back in when they're cold.

That are too small so they look tiny on the showroom floor but you can never get

Equipment. You pull it over all of you, then sit on the edges. Can throw over a

comfortable. Repackaged in larger stuffsack; companies always give you stuffsacks

disaster duffel only for deep winter disaster deployments.

The Bothy 4 (enough for 4 to shelter from wind, rain and snow). Add to

unless in deep winter or concerns about having to bivouac. For searches, I take

Weighs a couple of pounds, stuffs into a sack about 7" in diameter and 14" long,

field.

90

89 These are much more up-to-date than other hiking maps and topos, and are in

areas with lots of outdoor recreation, and thus likely search and rescue areas.

Also, if I happen to find myself in one of these areas with a few hours to kill, I've

got the maps for a hike right there. Cover the Appalachian Trail from mid-PA to

central VA, also popular hiking areas in north-west VA and nearby WV.

91 RAM X-grip: not nearly as convenient as my usual Arkon mount, but holds the

cellphone more solidly for driving off-road.

hatchet

2 titanium pry bars

bolt cutters

mini-KT-bar (extrication/wrecking tool)

1970s-era Air Force aluminum survival tool with hatchet, shovel, saw

Bottom Layer:

Fire extinguisher

Windsheild cellphone mount for offroad driving

AC 6-radio Wouxun radio charger

Large Vehicle Tool Kit

Electronics Tools

Soldering Irons: 12V, 110V, butane (with lighter-style butane refill tank)

Small solder (including low-melting-point solder strips, work with lighter)

Misc RF adapters (BNC, PL-259, TNC, SMA)

BNC coax patch cables with BNC M/M

Pocket multimeter with spare batteries

Wire crimper/stripper

Electrical Equipment

Continuity tester

Pocket AC circuit tester

Roll of electrical tape

car fuses (many kinds and ratings) and fuse puller

Light socket to AC adapter

Radio Shack Leatherman Squirt EL mini tool (with wire stripper, etc.)

Nippers

Hand Tools

Large and small Vise-grips

Sears Craftsman ignition pliers (small)

Alltrade needle-nose/standard pliers combination

Heavy-duty scissors

Wrenches (all Sears Craftsman except as noted)

Large and small crescent wrenches

Adjustable box-end wrench

Metric and SAE-Imperial hex key sets, folding

Metric wrenches in rolled case:

combination wrench set: 8mm-16mm

box-end wrench set: 6mm-18mm

ignition wrench set: 4mm-11mm

SAE-Imperial wrenches in rolled case:

combination wrench set: 3/8"-11/16"

ignition wrench set: 13/64"-3/8"

Socket/hex tools (sockets on Craftsman racks):

AmPro stubby ¼"-3/8" ratchet handle

Skewdriver® offset hex handle

86 Very expensive, ~$200, but light, warm enough for winter us and very, very

comfortable. Repackaged in larger stuffsack; companies always give you stuffsacks

that are too small so they look tiny on the showroom floor but you can never get

them back in when they're cold.

87 Most likely piece of essential gear to fail catastrophically, and hard to repair in

field.

88 This is a poleless single layer tent (though you can put hiking sticks or ski poles

in it) designed for temporary shelter for up to 12 sitting people. By Terra Nova

Equipment. You pull it over all of you, then sit on the edges. Can throw over a

supine patient and maybe 6 people, to provide shelter from wind, rain and snow.

Weighs a couple of pounds, stuffs into a sack about 7" in diameter and 14" long,

weighs a bit less than 3 lbs. Taken on rescues, but too big to take on searches

unless in deep winter or concerns about having to bivouac. For searches, I take

the SilBothy 4 (enough for 4 to shelter from wind, rain and snow). Add to
disaster duffle only for deep winter disaster deployments.

89 These are much more up-to-date than other hiking maps and topos, and are in

areas with lots of outdoor recreation, and thus likely search and rescue areas.

Also, if I happen to find myself in one of these areas with a few hours to kill, I've

got the maps for a hike right there. Cover the Appalachian Trail from mid-PA to

central VA, also popular hiking areas in north-west VA and nearby WV.

90 By far the best compact shovel I've seen; includes a root saw.
- generic hex screwdriver-style ratchet driver with set of bits in handle
- 6" long hex Phillips screwdriver tip (for deeply-inset screws)
- ¼" ratchet handle
- ¼" screwdriver-style handle driver
- ¼" 3" extension
- ¼" 3" flexible extension
- ¼"/hex finger-wheel driver
- ¼" metric sockets, 5-6-7-8-9mm
- ¼" SAE-Imperial deep socket set, ¼"-1/2"
- 3/8" 2.5" and 6" extensions
- 3/8" metric deep socket set, 10-19mm
- 3/8" metric/SAE-Imperial combination socket set: 3/8"-10mm to 7/8"-22mm, also 12,18 & 24mm
- ½" drive ratchet handle with extra sockets in handle
- ½" drive ratchet handle with extra sockets in handle
- ½" drive 24 mm socket
- ½" drive spark plug socket
- ½" to 3/8" and 3/8" to ¼" adapters, each both ways
- Small reversible Philips/standard screwdriver
- Craftsman small long screwdrivers, standard and Philips
- Offset standard and Phillips screwdrivers
- Set of 4 small Phillips screwdrivers
- Jeweler’s screwdriver and nutdriver sets
- Stubby Philips and standard screwdrivers
- Mini-hacksaw and extra blades
- Type 13 Anti-Seize lubricant in tube
- Mini-pry bars (2)
- Spare batteries: 9V (2: lithium), AA (8: lithium), AAA (6), C (4) D (2)
- Spare mag-mount 2m/VHF antenna
- Large and small cleaning brushes, and battery-terminal brush
- spare roll of color code tape
- duct tape
- Card stock and sheet protectors and Sharpie marker for posting signs
- Aluminum coathanger
- Thin steel wire
- Plastic kitchen trash bag
- Nuts, bolts, screws, nails, cable tires, spare wire, rubber bands, electrical terminals, small Bungee cords, thumbtacks, packets of epoxy glue,
- Red shop towels
- Gojo hand cleaner towels, individual packets, and paper towels
- Heavy work gloves (True Grip, used to be known as Bucket Boss)
- Triflow lubricant

- 2 Field phones, TP-6N, with batteries and spares, ¼ mile of disposable field phone wire, and 1 km of heavier wire in canvas dispenser, for cave rescue.
- Map Case (18” of 4” PVC pipe with end caps) with maps of nearby caves printed on water-resistant paper.
- Caving Gear Bag (see above)
- SAR Gear Bag (see above)
- 12-V tire pump
- 2 folding tire chocks
- Misc Gear Bag (see above)
- Gas can and siphon
- Mini-Opskit (in a file box; see http://www.conovers.org/ftp/Mini-OpsKit.pdf)
- Tech Rescue Bag (see above)
- Box of 4 FRS Radios with lithium disposable AA cells and spare alkaline AA cells
- Winch Tool Kit (standard Warn issue)
- Jump cable bag (Duluth Trading Co. Deluxe Jumper Cable Bag)
  - Heavy-duty jump cables
  - Work gloves (True Grip, used to be known as Bucket Boss)
  - Gunk pressurized can of tire sealer/inflator
  - Disposable coveralls
  - folding cross lug wrenches, Imperial and Metric (for other regular size cars)
- Full Spare tire: on bottom of vehicle, in back; held up by chain that can be lowered by winching through a little hole you can see once you lower the tailgate, using tools in the tailgate compartment
- In Tailgate Compartment:
  - Bundle of road flares
  - OEM vehicle toolkit
- Optional (only added when actually going out for trail maintenance, or if known downed trees from a storm):
  - Set of trail construction/maintenance tools on heavy leather tool belt/tool pouches
  - Woodsman’s Pal machete/brush hook
  - Folding loppers
  - Buck lightweight pruning shears (www.sarcamp.com)
  - Folding SvenSaw
  - Single-bitted Council Tool Velvicut axe in aluminum sheath (sheath from Madsen Logging Supply)
  - Glock entrenching tool®
- Stihl Chainsaw
- Ryobi Weedwacker
- Gas and oil for above
- 10-lb sledge
- Grass whips (2)
- Non-folding loppers
- Large shovel with cutting edge
- Mattock

92 Lighter and stronger and better built than all others I’ve tried.
Optional (only added when actually going out for a rescue or training, hanging in garage next to vehicle, in long orange bags):
- Sked stretcher with additional stuff in side pockets of carrying case:
  - purple stuffsack with three scraps of foam eggcrate padding for voids
  - Sunglasses case with safety goggles
  - (can use the two blankets from the back for insulation for packaging, there is an extra cave-worthy pack in the back for the blankets)
- Silynlon tarp as vapor barrier
- Skedco Oregon Spine Splint (OSS) to use with Sked.

**IX. Vehicle Equipment: Taiichi Ohno (2006 Scion xA)**

- **Dash/Central console**
  - Sunglasses/croakie hanging on rearview mirror (Native Eyewear Nano²)
  - Dashboard top cellphone mount
  - coin dispenser for parking meters
  - 2 mini-USB charger for cellphones
  - Dental flossers in ashtray
- **Center dashboard compartment:**
  - Victorinox Rescue Tool
  - Petzl Tikka headlamp+ spare batteries
  - spare pen
  - Petzl e+light minimal emergency headlight with two spare batteries (backup to the Zipka)
- **Center console open compartments an’ at**
  - Bottle of Tums smoothies
  - water bottle (Camelbak Podium)
  - driving gloves
  - parking display card
  - carwash card
  - waterproof pocket notebook and pen
  - laptop visor (between center console and passenger seat)
  - bottle of Windex (hanging on back of passenger seat)
- **Glove Compartment:**
  - small microfiber towel
  - spare dental flossers (to restock ashtray)
  - paper towels
  - Kleenex tissues
  - individual Gojo wipes
  - individual wet wipes
  - exam gloves, size M, 2 pr
  - USB light for laptop keyboard
  - 1:2 12V cigarette lighter adapter
  - mini-USB cellphone charger 1:2 adapter
  - laptop-car-stereo cable
  - bikerack key
  - Gerber Diesel multitool
  - Fiskars garden shears
  - small roll of duct tape
  - batteries: 6 AAA alkalines, 4 AA alkalines
  - battery tester for AA cells etc.
  - orange safety vest with “Mountain Rescue” label
  - spare quarters
- **Back (above carpeted lift-up hatch)**
  - Snow brush/ice scraper
  - Cable Chains⁹⁴
  - 1L bottle of cat litter (traction on snow and ice)
  - Windshield sunscreen
  - Insulated grocery bag
  - Squeegee/windshield cleaner
  - Army blanket covering things
  - Securitraction folding steel traction devices for snow or mud

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² I don’t plan to use this for any kind of rescue response, but figured it should have some basic emergency gear. It gets better than twice the mileage of my Land Cruiser.
⁹⁴ Useful in mud as well as snow.
- Canvas grocery bags and produce bags
- Large duffel
- Spare outer clothing for me and my family
- Mont-Bell Blizzard Pack compressed disposable sleeping bag
- Adventure Medical Kits’ Thermo-Lite® 2 bivouac sack
- Dog-chewed Frisbee
- 2 L bottles of water (preserved with a drop of Clorox each)
- For long trips: add sleeping bag, foam pad, Hennessey Hammock or tent
- StifNeck adjustable cervical collar
- **Combat Lifesaver Bag** Trauma Kit (Google Combat Lifesaver Bag for contents)
  - Attached: SAM Pelvic Sling II (compression binder for pelvic fractures)
- **HPMK** (military Hypothermia Prevention and Management Kit: hot packs and Space Sportsman’s Blanket type patient “sleeping bag” with hood and Velcro on either side.)
- Zip up black military waterproof boots
- 10 SMART triage tags for mass casualty incidents, with sharpie for marking on them

### Tool kit:

- Sears Craftsman #33192 192-piece tool kit ([http://www.conovers.org/ftp/Taiichi-Toolkit-Inventory.pdf](http://www.conovers.org/ftp/Taiichi-Toolkit-Inventory.pdf)) with a few additions:
  - Channel Lock Pliers #45385
  - Medium Pliers #45378
  - Needle nose Pliers #45102
  - Pin Screwdriver #41294
  - P2 Screwdriver #41298
  - 3/16” Screwdriver #41581
  - 1/8” Screwdriver #41583
  - Pocket Multimeter #82351
  - 3-pc Adjustable (“Crescent”) Wrench Set (6/8/10”) #10064
  - Small Vise-Grip Pliers

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From [www.adventuremedicalkits.com](http://www.adventuremedicalkits.com), I used to carry a Space™ Sportsman’s Blanket (heavier than the emergency blanket, and has grommets on the corners), folded in half with sticky Velcro stapled along two edges. This could be un-Velcroed and used as a tarp, or used as is as a quick bivouac shelter. However, this weighs almost a pound, and the Thermo-Lite sack weighs about half as much. There are no grommets on the corners but it wouldn’t be hard to tie some shroud line onto the corners, tying around a pebble if needed for strength. The Space Sportsmen’s Blanket will fold out flat, and the Thermo-Lite sack is sewed on the bottom and partly up one of the sides – but a pair of Swiss Army Knife scissors could make quick work of this. When I put Velcro on my Space Sportsmen’s Blanket, I put it all the way around on the bottom and side, and left the top open. The Thermo-Lite sack is sewn on the bottom and part-way up the side, and has Velcro up the rest of the side and, unlike my prior home-brew, across the top. But the Velcro is intermittent, with ~6” Velcro strips alternating with open areas. I’m not convinced my homebrew was superior, so I’m going to try the Thermo-Lite Bivouac sack (at [www.backpackergeartest.org](http://www.backpackergeartest.org) – great place for gear reviews) is that the small mesh vent at the bottom keeps closing when you make random movement, as there is both hook and pile Velcro on either side of it. I put a small piece of non-sticky pile Velcro in the stuffsack with the bivouac sack which should take care of this. Addendum: there is now a Sol Escape Bivy that is quite superior to this; I’m keeping this older one here to give away if needed. The Sol Escape is now packed with my sleeping bag.