

CRITERIA FOR A SECURE HOME:

In my concept of preparedness, security is much more than having good door locks and a security system. Essential as those are, people in the Northeast found out this winter that security from crime is only a small portion of overall preparedness. Ultimately, every home needs some depth in back-up contingencies in order to meet today's challenges. Let me ask you a few questions to illustrate:

HOW SECURE IS YOUR PRESENT HOME?

1. Without electricity, how would you keep your house from freezing? Do you have some type of wood burning heater? What about hot water?
2. If you have gas, what type of contingency would you rely on in case of an earthquake where gas mains were put out of commission for a month or two? Do you have back-up cooking facilities? Can you heat hot water without gas? What if you lose both electricity and gas?
3. What about lights? If there is a major power outage lasting for more than a week, would you be willing to rely on batteries or candles for a long period?
4. What about water supplies. Do you have extra tanks of potable water at your disposal should the public supplies be cut off or contaminated. In a long term outage, would you know how to collect and filter water from your roof system, or build a rain water collection cistern?
5. If a storm damaged multiple windows in your home during the winter, would you have sufficient plastic sheeting and repair materials to quickly enclose the damage so as to keep heat in the home?

EASY REMODELING SOLUTIONS TO GIVE YOUR HOME SOME CAPABILITY TO HANDLE MULTIPLE CRISES:

1. Install a couple of roof mounted Photo electric solar panels, and connect them through a mini-regulator to 4 golf cart batteries. This will give you almost unlimited auxiliary lighting in the home for short-term or long-term power outages. Buy a small 12 volt to 110 volt inverter and you can use these batteries to power some essential electronics like a computer, radio, or small television, to help you find out what is going on in a crisis. I have small RV type fluorescent lights mounted on the walls of every major room in my house. When the power goes off (which it does fairly often) I just flick on the auxiliary lighting and go about my business. You can also install a portable generator--but don't forget fuel to run it. My High Security Shelter book outlines some interesting tips on how to connect the generator right up to your house circuits without costly switching equipment. Cost? Less than a \$1000 for either system. Don't buy expensive brand name generators like Kohler and Onan. There are many excellent bare bones units at Sam's Clubs, Home Depots, Hechingers, and Costco at 1/4 the price. Always get generators that have at least 4500 watts output so you can run a refrigerator or a freezer.
2. Install a second hot water tank next to your present tank, and plumb it so all the incoming water flows through the first before it goes to the second. If your main one is gas, make the auxiliary one electric--just keep the element off until you need it. Even if you don't need the extra hot water yet, it will serve as a constant reserve supply of fresh water in case of a shortage. There is a complete plumbing schematic in the appendix of my "How to Implement a High Security Shelter" book. Make sure you strap them both securely to the wall to keep them from toppling over in an earthquake. Cost? less than \$250.
3. Always have some backup wood heating (preferably an air-tight stove) in the home if you live in a cold climate. Even without electricity you can keep your water pipes from freezing. Without it you are at the mercy of the elements. It's best to locate these in the basement so as the heat rises, the rest of the house stays warm. Most stoves have an optional hot water heating coil. Always order this option and hook it up to an auxiliary water heating tank. This way, you can have hot water even if there is no electricity or gas. Cost? about \$1200-1800 installed. Add another \$500 for installation of the hot water heating option.
4. If you cook with gas, make sure you have an electric hot plate or an electric skillet to back up your gas unit. If you rely on natural gas, you can buy a set of alternative LP jets for your range and switch to LP gas in an emergency. Buying an LP gas tank (250-500 gallons) will cost about \$1 per gallon. But the stored LP gas will keep indefinitely. A cheaper alternative is to buy 2-4 of the 20 lb. propane BBQ cylinders and hook them up to a propane camp stove that you can place on your countertop when you

need it. This is the best option for those who normally cook with electricity. Cost? \$100-\$500 depending on which option you choose.

5. Lastly, Stockpile things in advance. Not just food and water, but also essential supplies that you would need in an emergency--especially when you want to fix something and can't run to the store. Even if you could, in most emergencies the stores are cleaned out in a matter of hours. My High Security Shelter book has several complete stockpiling and storage lists in the appendix.

IF YOU WANT TO DESIGN A CUSTOM HOME OR RETREAT WITH THE FULL RANGE OF SELF-SUFFICIENCY AND SECURITY, I CAN HELP YOU IMPLEMENT THE FOLLOWING.

Naturally, you can select to incorporate as much or as little of this list as you like. However, I generally recommend that you try not to make "irreversible errors" as you economize. In other words, if you decide you don't need a basement shelter now, but change your mind later, it becomes extremely costly to retrofit a basement into the construction after the house is built. Or, suppose you cannot afford photovoltaic solar panels now. At least install the heavy gauge DC wiring to the attic so that all you have to do is hook them up later--no messy tearing into the walls to insert the wires. See what I mean?

- **A multi-purpose High Security Shelter.** This serves as a vault room for valuables, a storm, tornado, and hurricane shelter, a fallout shelter, an earthquake shelter, a fireproof room, and a secure place to retreat to in case of intrusion. These are usually equipped with concealed entry and exit tunnels. They have integral sleeping, eating, and bathroom facilities, plus communications, self-contained electrical power, and filtered ventilation.
- **Multiple water sources and storage.** A well or spring is preferred in addition to public water. In certain cases I specify rain water cisterns and other storage tanks, both static and gravity feed.
- **Dual AC-DC electrical sources.** AC power comes from either the public utility power grid or a self-contained power system (generator, wind, or water power). The DC source comes from photovoltaic solar collectors tied to a battery bank. Auxiliary 12 volt lighting is used along with 110 volt lighting. Inverters are also used to provide certain circuits in the house with continual back-up AC power from the battery bank.
- **Multiple space heating sources.** I design in solar heat where possible, combined with combination furnace systems that use gas or propane, wood, oil, or in some cases electricity--especially when excess energy is produced by alternate sources.
- **Multiple water heating sources.** These include solar pre-heat, linked to gas, electric or wood heaters.
- **Multiple cooking sources.** primary stoves are gas or electric. Backup is LP gas, or wood.
- **Real time security system.** The types I specify give you real time feed back as to the nature of the threat. It is every important that you know where the threat is coming from--within or outside the house and in what direction they are moving. I use annunciator zones to electronically detect and announce movement, augmented by cameras as necessary. All systems are linked to various key places, and to intercoms for warning other family members. Master stations also go into the security shelter.
- **Built in fire hose or sprinkling system.** This is especially important for rural retreats which are far away from public fire stations. Attention to fireproofing the exterior or interior of the home is also addressed as needed.
- **Hardened exteriors.** I can design a variety of levels of intrusion resistance, including bullet proof walls, windows and doors. As a minimum, the security room and master bedroom doors are hardened to a level 3 or 4.
- **Low profile Strategy with multiple contingencies.** Not drawing attention to one's self and planning a variety of responses for different situations is part of my strategic design for each client. All my work is done in the strictest confidentiality. I never show homes or plans I have designed to other potential clients.

RELOCATING FOR HIGHER SECURITY:

While there are no perfect places to live for everyone, there are places that suit each type of family more than others. There are places where you spend a lot less money protecting yourself against the common threats that abound in today's uncertain world. Check out my relocation section on this site and find out more about where your ideal location may be. I can also provide personal and private consultation services in this regard.

PRESS YOUR BROWSER "BACK" KEY TO RETURN TO HOME PAGE

Recommended Equipment and Sources--Online Update

Copyright notice. This section of the book is to update the hard copy for those who have purchased The Secure Home. Visitors to this site are free to view the material, but should not copy it unless they have purchased the book. You're on your honor, as I have no way of enforcing this. Hopefully, through this sample you will realize how valuable the 700 page book is.

I have not included many conventional products for building here, but rather have concentrated on those less conventional items that I have commented about during the text. I have used many of the products mentioned here. However, there are many items that I have not had personal experience with. I have attempted to judge these within the limitations of written claims, but you should use your own judgment as well in evaluating their suitability to your needs. I make no guarantees about the performance or reliability of these products or services. Surely, there are other similar products to the ones I have mentioned that may be available and yet unknown to me. Because they are not mentioned does not mean that they are not acceptable. If they follow the general criteria given, feel free to consider them. If I have time, I can try to check out a product of interest to you, if you will provide me some relevant sources or descriptive information. Any feedback you have, negative or positive, about any of these products will be appreciated.

This page also provides the source information for those who have the booklet *10 Packs for Survival*. If you find errors here or see web addresses (URL) that do not function, please inform me by Email at joel@joelskousen.com

PRODUCT SUPPLIERS

Here is a list of suppliers who carry a variety of items mentioned in this list. To save space, I will only mention their name as a source within the list, instead of giving out their address and telephone numbers each time they are mentioned. Check here for contact information if it isn't listed in the body of the list. In most cases I will try and give an Internet website URL (URL means an Internet address, usually preceded by a www). Going to a company website will allow you to view the product and read important information. This will save you much time and effort.

ABRAHAM SOLAR EQUIPMENT: This is my top recommended source for all your solar and alternate energy products. Mick has low prices and he knows all the equipment personally, including how to install it. Above everything, I can personally vouch for Mick Abraham's honesty and integrity. This is a source you can completely trust. Order line: 1-800-222-7242, Free consultation (970) 731-4675; address: 124 Creekside Place, Pagosa Springs, Co. 81147.

J & A SPECIALTY PRODUCTS: (801) 224-9139. My two sons Jerome and Andrew are buying some limited specialty items that are not being carried by other survival stores and which are hard for my readers to find, without having to deal with some awful multi-level sales system or buy in large wholesale quantities. They will be selling these items at a small profit margin mostly for your convenience. The items they will help you buy are denoted by term "J & A Specialty".

EMERGENCY ESSENTIALS: Largest of the Utah-based full service preparedness products stores. Website URL: Tel: 1-800-999-1863 Address: 165 South Mountain Way Drive, Orem, UT 84058.

MAJOR SURPLUS AND SURVIVAL: Biggest of the California survival food and products stores. Website URL: www.majorsurplusnsurvival.com. Address: 435 W. Alondra Blvd.; Gardena, Ca 90248 Tel: 1-800-441-8855.

NITRO-PAK: Carries a full line of survival foods and products. Website URL: www.nitro-pak.com.

WALTON FEED: Largest of the survival food suppliers. Walton Feed, 135 North 10th, P.O. Box 307, Montpelier, ID 83254. Tel: 1- 800-269-8563.

LEHMAN'S CATALOG: The largest of the self-sufficient/back-to-the-land suppliers. URL: www.lehmans.com. Address: Lehman's Non-Electric Catalog Listing ID 575. Phone: 330-857-5757 Fax: 330-857-5785 Email: getlehmans@aol.com Mail: Lehman's, One Lehman Circle, P.O. Box 41, Kidron, OH 44636 USA.

ALTERNATE ENERGY ENGINEERING: California-based company. Website URL:

www.asis.com/aee/

JADE MOUNTAIN showroom: 717 Poplar Ave., Boulder, CO. Address: P.O. Box 4616, Boulder, CO 80306. Website <http://www.jademountain.com>. Call: 800-442-1972 Tech Support: 303-449-6601 Fax: 303-449-8266. Jade Mountain is a very large alternate energy store that sells almost everything.

AMATEUR ELECTRONIC SUPPLY (AES): Biggest of the Ham radio and antenna stores. Order their catalog: 1-800-558-0411.

HAM RADIO OUTLET: 1-800-644-4476 (east) or 1-800-854-6046 (west). Second biggest ham radio and equipment stores. Order their catalog.

RADIO SHACK: website www.radioshack.com. Nationwide electronics parts, radios, telephones, and security systems. order line: 1-800-843-7422 (get a catalog at local store or see it online).

WW GRAINGER: Nationwide wholesalers of almost every type of equipment. You must have some type of business in order to establish a wholesale account with them, but it is worth it. Check their website for the warehouse nearest you: www.grainger.com.

NORTHERN TOOL AND EQUIPMENT: Major discount mail-order catalog company. Website: www.northern-online.com or 1-800-533-5545.

HOME IMPROVEMENT STORES TO PURCHASE ITEMS AT A DISCOUNT

COSTCO WHOLESALE: See website for location of stores nearest you: www.costco.com. They are in 26 states East and West (no midwestern locations yet). Chain discount bulk supplies of household products and services.

SAM'S CLUB (WALMART CHAIN): Nationwide chain carrying bulk supplies at discount prices.

HOME BASE: Ten Western states. Discount priced home, hardware, and garden supplies. Website URL: www.homebase.com.

HOME DEPOT: Largest national home improvement store chain. Website URL: www.homedepot.com.

LOWES: Eastern-based home improvement discount store, second largest in the nation. Recently merged with EAGLE HARDWARE to gain a western base.

LISTINGS

NOTE ON PRICING: Prices listed were current in January, 2000. They will almost always be slightly higher when you order, after this date. Venders listed are not obligated to honor the prices I have listed.

CONSTRUCTION MATERIALS AND EQUIPMENT

GROUND SOURCE HEAT PUMPS

SunQuest, Inc. 1555 Rankin Avenue, Newton, NC 28658 USA

Tel: 828-465-6805 Fax: 828-465-7370.

WaterFurnace International, Inc. 9000 Conservation Way, Fort Wayne, IN 46809 USA

Tel: 800-222-5667.

PLASTIC LUMBER DECKING

Energy Conservation Products, Inc. 4411 Bee Ridge Road, #344, Sarasota, FL 34233 tel: 888-329-2705

Black Rhino Recycling, Inc. 4503 Lebanon Church Road, West Mifflin, PA 15122 USA Tel: 412-460-0160. URL: <http://nauticom.net/www/arhino/>

Resco Plastics, Inc. 1170 Newport Avenue, Coos Bay, OR 97420 Tel: 541-269-5485.

STEEL DECKING FOR FORMING UP SHELTER CEILINGS:

FormDeck Comes 36" wide in variety of lengths. Contact Structures of USA, P.O. Box 639 Johnstown, PA 15907 Tel: 814-536-8371 URL: <http://www.structuresofusa.com/> Many other brands of steel decking are available at local steel suppliers in most large cities. Deal locally to avoid shipping costs.

SHATTERPROOF WINDOWS AND SKYLIGHTS

Roto Frank (German made) high strength skylights. Available in US at skylight distributors.

Andersen Windows makes a triple laminate glass with polymer layers in between. These windows are intrusion-proof, and will not scratch like Shattergard film. This is the glass system they use on their high strength (hurricane-proof) skylites. You can order this glass in their regular window line as well. Cost is about 30% higher than standard glass/wood windows. Andersen Windows (available at window suppliers everywhere).

STAIR-STEPPED MODULAR WINDOW WELL (for fire escape)

Scapewell by The Bilco Company: URL: www.bilco.com. The Bilco Company, P.O. Box 1203, New Haven, Connecticut 06505 Tel: 203-934-6363.

INSULATING WINDOW FILMS/INSULATION

Window Coverings Company sells an *interior acrylic magnetic window panel* that will make a home more livable during cold weather. These panels are easily removed and can be painted for use as black out interior shutters. They will save over 40% on your fuel bills. Email them at Eaglemarket@webtv.net.

CLEAR VINYL PLASTIC FOR WINDOW REPLACEMENT

This product used to be made by **Rubbermaid** Coporation URL: www.rubbermaid.com. but is no longer being carried. The product was called All Purpose Vinyl and came in 54" wide rolls. It was great for stockpiling in case windows get broken in storm or earthquake. It is nearly indestructible and perfectly clear. I'll will try and locate an alternate source. Email me if you find one. (joel@joelskousen.com)

QUILTED DECORATIVE INSULATING CURTAINS FOR SOLAR WINDOWS

TAIOWA, 1-800-347-6170 They sell both the rolling interior quilted shades or the solid panels for window coverings.

FOIL INSULATION

Astro-Foil comes in two styles: Astro-Foil itself is two-ply bubbles with three layers of aluminum, and is about 5/16 of an inch thick. Astro-E is single-ply bubble material with two layers of foil, about 3/16 of an inch thick. It comes in 50-foot rolls that are 1, 2, 3, 4, and 5 feet wide and 125-foot rolls in 4 and 6 feet wide. Prices vary, but the only supplier is **Innovative Specialities** 1440 W. Douglas Ave, Wichita, KS 67201. Tel: (316) 265-6712 URL: www.innovativebldgproducts.com

ALI Industries. ALI Industries offers Multi-layer aluminum foil insulation for the highest R value.

Reflectix, found at home-improvement outlets. Reflectix, however, does not carry Uniform Building Code stenciling, required for commercial structures. It's primarily used by do-it-yourselfers. A 4 by 50-foot roll of Reflectix at Eagle Hardware is \$124.95. The same size of Astro-Foil is \$126 and Astro-E is \$122.

SOUND INSULATION

Insul-Tek and O.E.M. Sound Deadener, self adhesive automotive stype sound-proofing. This is very compact, effective material. Call **Juliano's** to order. Orders: 800-300-1932 Technical Assistance: 860-872-1932. Insul-Tek 1/4" thick core of polyethylene foam with aluminum foil bonded to both sides. Will not absorb moisture. Reduces noise level by 40%.

SONEX Professional quality deep finger foam for shooting ranges. **Ilbruck Inc**, 3800 Washington Ave North Minneapolis, Mn 55412. Tel (612) 521-3555.

ADD-ON PROTECTIVE FILMS

Shattergard Protective Film (unbreakable backing to standard glass). It can be applied to existing house and car windows. Makes windows bullet-proof to small caliber (.22) weapons and makes windows impenetrable to intruders. www.shattergard.com.

FIREPROOF SHEETROCK

In the 1980's a woman invented real fireproof plaster that was vastly superior to type XX sheetrock (which merely sloughs off during a fire. The product is called **GEOBOND**, and comes in panels as well as a stucco-like exterior coating. It can be used in combination with many other materials. Website: www.geobond.net This is a truly amazing family of products.

FIREPROOF PLYWOOD

Plycem. This is a recycled material which has higher densities than all other sheathings. It is marketed by **Castleblock** P.O. Box 1893, Ventura, CA USA 93002 Tel: 800-672-7872 Website: <http://www.castleblock.com>.

STRUCTURAL BUILDING PANELS

R-Control Structural Building Panels. factory-made wall systems that replace wall framing. **AFM Corp.** <http://www.afmcorp-epsfoam.com> 1-800-255-0176.

FOAM BOARD WITH OSB ATTACHED NAILING SURFACE

R-Control Speclam (insulation foam attached to particle board) **AFM Corporation** 24000 West Highway 7, P.O. Box 246 Excelsior, MN 55331 Tel: (612) 474-0809 or 1-800-255-0176 Fax: 612-474-2074

EIFS (EXTERIOR INSULATED FINISH SYSTEMS)

Exterior insulated finish systems (EIFS) consist of synthetic stucco applied over insulation board, which is then installed over sheathing. These systems have been used commercially for years, but they received some bad press recently when homeowners complained that these systems were failing. Moisture penetrated the wall and the sheathing and structural members rotted. While manufacturers, contractors, and homeowners swap complaints, drainable siding is entering the picture. Manufacturers say that this system allows moisture that gets behind the stucco to drain harmlessly to the outside.

Dryvit: website: dryvit.com. Tel: 800-556-7752. Dryvit Systems, Inc. One Energy Way, P.O. Box 1014 West Warwick, RI 02893.

Pleko See website at www.pleko.com (Dryvit substitute; more competitive in price.)

CHEAPER ALTERNATIVE TO EIFS

The **QUIKRETE®** Hardcoat Stucco System provides builders and contractors with unparalleled durability and moisture protection that is lacking in Exterior Insulation and Finish Systems (EIFS). The Hardcoat Stucco System is comprised of QUIKRETE Liquid Stucco decorative coating over a base coat of QUIKRETE Fiberglass-Reinforced Stucco. Unlike EIFS, where water may become trapped between a synthetic finish coat and the interior drywall, Fiberglass-Reinforced Stucco acts as a drainage medium. If water penetrates the top coat of Liquid Stucco, it will migrate down the base coat and out through a flashing at the concrete footing. The Hardcoat Stucco System combines the design versatility and energy efficiency of EIFS with the durability and water drainage benefits of cement-based systems. Fiberglass-Reinforced Stucco is reinforced with alkali-resistant glass fibers. It provides a high impact, crack-resistant shell and can be trowel or spray-applied at a 3/8-inch thickness using wire mesh over insulation board or sheathing. Fiberglass-Reinforced Stucco also provides the ideal base for the Liquid Stucco decorative coating, which is a moisture-resistant color and texture coating designed for use over concrete and stucco surfaces. This ready-to-use and trowel-applied product is a 100 percent acrylic co-polymer-based coating. It is available in swirl, coarse sand, and fine sand textures and can be pigmented to any desired color, thus offering unlimited design options. This system can also be used over the concrete stack-block method.

URL: www.quickcrete.com.

ELECTRICAL, MISC

GFCI (Ground Fault Circuit Interrupter). Installing a GFCI outlet for your washing machine for shock protection is worthwhile. However, some GFCIs might trip every time the motor is activated. To prevent this type of nuisance tripping, the **Leviton** Manufacturing Co. indicated that you should get the Hospital Grade GFCI outlet rather than the regular commercial grade. The catalog number of this part is 6598-HG, and it's available at commercial electrical supply stores.

FIXING BASEMENT CRACKS

Most use hydraulic cement (rigid). For a better job, fill the crack on the inside using a tough, but flexible professional-grade sealant such as **SIKAFLEX 1A**. Prepare the crack according to the manufacturer's instructions, then coat it with Sikaflex primer 429 and apply the Sikaflex-1a. Finish up by covering the repair with SikaTop Seal 107, a polymer-modified, cement-based coating. A 10.3-ounce cartridge of Sikaflex-1a costs about \$5, a pint of primer about \$12.50 and the SikaTop Seal about \$40. Bear in mind that these products are not sold at home centers or hardware stores. They are sold through construction

supply houses, some of which are reluctant to sell less than case-size quantities to a homeowner. So the prices of individual cartridges or cans may vary from what we show here. For more information, contact **SIKA CORP.** 201 Polito Ave., Lyndhurst, NJ 07071; 800-933-7452.

GREENHOUSE MANUFACTURERS AND COMPONENTS

Conley's Mfg. & Sales 4344 E. Mission Blvd., Montclair, CA 91763 Tel: 909-627-0981 URL: www.conley.com (a commercial greenhouse manufacturer. Will send components to you as well as twinwall glazing at wholesale rates).

Nexus Corp. 10983 Leroy Drive Northglenn, CO 80233 Tel: 303-457-9199 URL: www.nexus.com (A commercial greenhouse manufacturer. Will sell components to you as well as twinwall glazing at wholesale rates).

PLASTIC GREENHOUSE FILM

Armin Plastics Corp. 18901 East Railroad Street City of Industry, CA 91748 Tel: 800-654-8119 URL: www.armin.com (supplies a full range of single layer plastic, UV protected greenhouse coverings - suitable for warmer climates).

STRUCTURAL METAL COMPONENTS (aluminum square tubing, round tubing etc)

Allied Tube & Conduit 16100 S. Lathrop Ave. Harvey, IL 60426 Tel: 800-882-5543 URL: www.allied.com. Also available at steel/metal supply houses in all major cities.

DEHUMIDIFYING AIR TO AIR HEAT EXCHANGERS

HEAT WHEELS by XeteX, Inc. 3530 E. 28th St.. Minneapolis, MN 55406 Tel: (888) 899-9991 Toll Free. (These unique spinning wheels have water absorbing media on the blades which transfers humidity from incoming fresh air to the outgoing stream of exhaust air.)

WATERPROOFING MATERIALS FOR BASEMENTS, UNDERGROUND HOMES

SODIUM BENTONITE (For waterproofing underground rooms, shelters, homes)

Black Hills Bentonite Box 9, Mills, Wyoming 82644 URL www.bhbentonite.com Email: bhbentonite@doccee.com. You can also find bentonite pellets at almost any well drilling outfit.

Paraseal (HDPE) Waterproofing Membrane (from **W.R. Grace Co.**, and national firm. Local construction firms can get this product). Paraseal is a dual combination of two of the most effective waterproofing materials, high density polyethylene (HDPE) and bentonite clay, laminated together to form a tough, single sheet membrane. It is easily installed and typically applied on backfilled wall conditions, under floors, decks, or as a pond liner. The Paraseal dual membrane system is also available in a lagging grade, Paraseal LG, which is designed for blindside installations or where shotcrete is to be blown directly into the face of the membrane.

Bituthene Heavy duty waterproof membranes that can literally surround the outside of a basement (even under slabs and footings) to make a basement waterproof in a high water table area. Bituthene 1000x by **W.R. Grace Co.** (available through local concrete contractors).

Vulkem 201/222 are also ideal for waterproofing foundation walls. By Tremco Incorporated 3735 Green Rd., Beachwood, OH 44122 Tel: 216-292-5000 or 800-321-7906.

WATERPROOFING FOR DECKS

Vulkem #350/351 Pedestrian Deck Coating System. **Tremco** Incorporated 3735 Green Rd. Beachwood, OH 44122 Tel: 216-292-5000 or 800-321-7906.

CUPOLAS (special decorative vent housings that go on top of traditional styled roofs and barns)

Stephenson Cupolas and Weathervanes. **Nashvilled Sash and Door**, Tel: (615) 254-1371

Edon Fiberglass Cupolas. 1-800-255-0176, URL www.edon.com (These are indestructable vents and never need maintenance).

CONSTRUCTION TYPES: ALTERNATIVE

INFORMATION ON CONCRETE HOMES

www.concretehomes.com

PRECAST CONCRETE

Thermomass Residential Building Systems. (The best residential system in the world - uses a thermal sandwich of foam in between two concrete precast surfaces. Has heat mass characteristics, rodents cannot get into the foam layer, bullet-proof, and the best sound-proofing available) 1999 Highview Rd. Coralville, IA 52241 Tel: (319) 351-4232 Fax (319) 351-0993 Website: www.t-mass.com.

Kistner Concrete Products, Inc. (Prefab security buildings, precast basement foundation systems) 8713 Read Road East Pembroke, NY 14056 Tel: 716-762-8216 Fax: 716-762-8315 Website: www.kistner.com.

Tierra Concrete Homes P.O. Box 1924, Pueblo, CO Tel: 719-947-3040 Fax: 719-947-3050.

Oldcastle Precast Custom precast water-proof concrete tanks. Can combine these to make drop-in-the-ground shelter systems. Contact: Oldcastle Products, 2820 A Street, SE Auburn, WA 98071-0608 Tel: 253-833-2777 Fax: 253-939-9126 or 888-232-6274. Website: www.oldcastle-precast.com They have local manufacturers all over the USA.

PRECAST CONCRETE SLABS (AIR CORE CONCRETE)

For use as flooring systems or roofing systems. Duct heat or cooling air into the floor tubes.

FLEXICORE brand slabs are available in all states. Check with commercial concrete contractors.

THERMAL MASS CONCRETE BLOCK CONSTRUCTION

ARCHITERRA These designers and builders have the most experience in heat mass - passive solar homes. Their system is applicable to most areas of the country, but especially the West. I don't agree with all their techniques or their pricing commissions, but you can learn a lot from their information and implement what you want on your own. They cover waste treatment systems, earth sheltered homes and

AVOIDING AND MITIGATING STRATEGIC THREATS THROUGH RELOCATION

What follows are some excerpts from my new book "Strategic Relocation--North American Guide to Safe Places". If you wish to research this subject further you can order the book toll free. See the section on Ordering Special Reports. The following are the major threats we will face in the next 20 years:

- 1. NATURAL DISASTERS (storms, tornadoes, floods, hurricanes, earthquakes, earth changes)
- 2. HEALTH THREATS (air pollution, water quality, disease, bad nutrition, establishment medical control or suppression of viable alternatives)
- 3. CRIME, SOCIAL UNREST (riot, criminal activity, racial/class conflict)
- 4. ECONOMIC DISASTER (depression, speculation, market manipulation, controls, shortages, excess regulation, unnatural growth)
- 5. WAR, TERRORISM, INVASION (nuclear, biological, chemical threats; terrorism, refugees, invasion)
- 6. GOVERNMENT INTRUSION UPON LIBERTY. (conspiracy for control, intrusions upon privacy, property rights, liberty, self-defense. Also, religious persecution and values control through education and media propaganda)

Below I have listed some cities that rank as the most dangerous in terms of some of these threats:

WORST 25 METRO AREAS FOR CRIME:

1. Miami, Fl
2. Baton Rouge, La
3. New York, NY
4. Tallahassee, Fl
5. Los Angeles, Ca
6. Jacksonville, Fl
7. Gainesville, Fl
8. New Orleans, La
9. Little Rock, Ar.
- 10 Jackson, Tn
11. Tampa/Clearwater, Fl.
- 12 West Palm Beach, Fl
13. Baltimore/Washington DC, Md
- 14 Albuquerque, Nm
15. Chicago, Il
16. Dallas, Tx
17. Lakeland/Winter Haven, Fl
18. Charlotte, NC
19. Pueblo, Co
20. Fresno, Ca
21. Flint, Mi
22. Jersey City, NJ
23. Kansas City, Ks, Mo
24. Orlando, Fl
25. Riverside, Ca.

THE TOP 5 MOST DANGEROUS METRO AREAS FOR EARTHQUAKES:

1. Mexico City, Mexico
2. San Francisco/Oakland
3. Los Angeles basin, Ca.
4. Anchorage, Ak
5. Seattle Wa.

THE TOP 10 MOST DANGEROUS NUCLEAR TARGETS IN OR NEAR A METRO AREA (there are several other primary targets not listed that are not near a major metro)

1. Washington DC /and related bases (major command and control for the President)
2. Colorado Springs, Co (Cheyenne Mtn Control Center, 2 space command/comm bases)
3. Omaha, Ne (secondary command and control bases)
4. Seattle, Wa. (Trident Missile Sub base and numerous Naval Bases)
5. Jacksonville Fl/Kings Bay Ga. (Trident Missile Sub base, Major East Coast Naval Center)
6. San Diego, Ca (largest west coast naval complex)
7. Norfolk, Va (major east coast naval complex)
8. Kansas City, Mo (Whiteman AFB, B-2 nuclear bombers)
9. Cheyenne, Wy (Warren AFB, Minute Man and Peacekeeper MX missiles)
10. Great Falls, Mt (Malmstrom AFB --Minute Man missiles)

Now for some good news: Here are my current ratings for the TOP 10 MODERATE GROWTH, MEDIUM SIZED METRO AREAS that are relatively safe from strategic threats, or where you have a good chance of mitigating those threats. This are not the best areas, but the areas where most people who need to stay in the job markets will find medium term security:

1. Boise, Id
2. Provo-Orem, Ut
3. Beaverton, Oregon
4. Santa Rosa, Ca
5. Greenville, Sc
6. Winston-Salem/High Point, NC
7. Austin-San Marcos, Tx
8. Grand Rapids, Mi
9. Reno, Nv
10. Madison, Wi.

For those of you on a tight budget, here are the TOP 10 MOST ECONOMICAL STATES to live. These ratings take into consideration overall taxes, housing, and cost of living. These ratings also exclude most large metro areas, where costs are much higher than the state average.

1. Arkansas
2. Alabama
3. Louisiana
4. Texas (except Dallas Metroplex)
5. West Virginia
6. Oklahoma
7. South Carolina
8. Mississippi
9. Wisconsin
10. Tennessee

SOME STATES WITH TAX ADVANTAGES: This doesn't tell the whole tax story since all states collect a lot of taxes. However, a person whose financial structure or income structure is different from the average person can take advantage of this by living in a state which doesn't tax his particular form of income or spending patterns. There are more details in my book, "Strategic Relocation"

STATES WITH NO INCOME TAX: Alaska, Florida, Nevada, New Hampshire (but has 5% tax on div/int) , So. Dakota, Texas, Washington, Wyoming.

STATES WITH NO SALES TAX: Alaska, Delaware, Montana, New Hampshire, Oregon,

STATES WITH NO INCOME OR SALES TAXES, BUT HIGH PROPERTY TAXES: Alaska, New Hampshire.

STATES WHO SHARE A BORDER WITH NO SALES TAX/NO INCOME TAX STATE: In these states, you can live in a no income tax state and shop across the border in a no sales tax state:

Washington/Oregon Wyoming/Montana So. Dakota/Montana

As you can see, it can be rather enjoyable or frustrating doing this kind of analysis, depending upon where you presently reside. I hope you will enjoy the entire book, which offers many more areas of interest to analyze. There is a complete listing of the table of contents in the section on how to Order Special Reports and Books.

PRESS YOUR BROWSER "BACK" KEY TO RETURN TO HOME PAGE

JOEL M. SKOUSEN

HIGH SECURITY DESIGN SPECIALIST

290 West, 580 South, Orem, Utah 84058

(801) 224-4746 email: jskousen@enol.com

SPECIALIZING IN THE DESIGN OF HIGH SECURITY AND SELF-SUFFICIENT RESIDENCES AND RETREATS

FEATURING:

- ALTERNATE ENERGY INTEGRATED SYSTEMS (Generators, Solar Panels, Inverters, Batteries and controllers)
- MULTI-PURPOSE, CONCEALED HIGH SECURITY VAULT ROOMS
- MULTI-FUEL EQUIPMENT (for heating, cooking, and water heating)
- INTEGRATED, REAL TIME SECURITY WARNING SYSTEM
- BULLET PROOF AND ENTRY RESISTANT CONSTRUCTION
- MULTIPLE STORAGE ELEMENTS FOR FOOD, WATER, AND FUEL

CONSULTATION AND CUSTOM DESIGN SERVICES

I specialize in the design of self-sufficient, secure, personal residences and retreats. In the preparedness area I provide consultation on a wide variety of subjects: Relocation, site selection, contingency planning, self-sufficient living, and home design. I have been working in this field since 1976 and thus have a broad range of personal experience in everything I recommend. In the design field, I am equally as comfortable working with a remodeling design as a new custom home or retreat. I also do a lot of stock plan modification for those who cannot afford custom design services. Almost any standard stock plan with a basement can be made secure and energy efficient. I am also pleased to help you implement your own designs and let you do as much of the design work that you feel comfortable with. In my design philosophy, I try to give the client what he or she wants, and am not interested in designing monuments to my reputation. I will, of course, advise you if I feel something you are planning to implement has serious drawbacks. That's what you pay me for. In general, self-sufficiency and security can be designed into a full range of styles, from classical to modern. I emphasize the need, however, to keep a low profile, and generally recommend that the finished product not draw undue attention to itself. In all of these areas, I design with the goal of complete integration of the applicable technical equipment you need to become more self-sufficient.:

SPECIAL NOTICE: Due to the high demands on my services, I am temporarily limiting my design practice to design and consulting on the security shelter and self-sufficiency aspects of my clients homes-- rather than whole house design. In this manner I can serve tens of clients per year instead of 4 or 5. I can, therefore, maximize my time in helping you implement the complex equipment and strategies that are my specialty, rather than spending my limited time on drafting, which can be accomplished by any number of other professionals. With this in mind, I encourage you to work with a stock plan, local designer or architect to come up with the conventional design of a home, coordinating with me during the process as a consultant and advisor on the specialty preparedness designs and systems. This also helps in securing the various building permits necessary in your area since you will have someone local to help deal with any objections that may arise. More and more often, unfortunately for your budget, many building officials are requiring you to get the plans certified by a local, licensed engineer. Its not so much that engineering fees are too high, but rather, that the increase structural requirements added by licensed engineers will add thousands of dollars more in cost to the design. Over-engineering is a chronic problem in engineering, as applied to residential construction

CONSULTATION: I try to be accessible to those who need telephone consultation about relocation or on security design and equipment. My rates are \$60 per hour, pro-rated by the minute. If I advise you for 15 minutes, you simply send me \$15 dollars. No appointments are necessary. I find it works best for all

involved for me to take your calls as they come in. If we establish an ongoing consultation, I bill you at the end of the month. Consultations out of town to help you select and assess property must be made in advance and require a retainer fee of \$500--my daily rate.

HOW TO PROCEED

The design and construction of a preparedness residence is fairly costly and time consuming. In order to maximize your dollars you will need to analyze certain aspects of your intended plan before proceeding with the actual design:

- 1. Suitability of location as related to work, population centers, shopping, and schools
- 2. Property access problems and related costs
- 3. Availability of utilities and cost of alternatives
- 4. Development restrictions, zoning, and sanitation requirements.

Additionally, we need to discuss the features of terrain and vegetation on the specific intended property, to include:

- 1. Water availability
- 2. precipitation, wind patterns
- 3. Forestation and landscape screening
- 4. Rock, soil, or water table problems
- 5. alternate power generation sources, if desired
- 6. house site possibilities

If you have not selected a specific home site, I can offer considerable assistance as to the best general and specific locations in which to find selfsufficient or secure property. Once we have talked and you have searched out recommended areas, and located one or two prospective sites, you may wish to have me come out and help select the best specific location. I usually take care of the preliminary design interview at this time in order to generate a rough preliminary plan (once the property has been selected).

The first step in getting started is to prepare a written summary of your proposed plans and projects for my review. A retainer of \$200 is required, to cover my time to review, analyze and respond in writing, to your plans. Feel free to call me during this period of initial review for any personal clarification. After the analysis and preplanning are firm and the property selected, you will be ready to proceed with a formal design--either with a modified stock plan or a custom design in conjunction with the designer or architect of your choice in your local area. I will work with the designer to make sure the over plan can accommodate the specialty features you need for a preparedness home.

FEE SCHEDULE:

TRAVEL AND ONSITE CONSULTATION: \$500 per day plus travel expenses. Retainer for one day's consultation due in advance of actual travel to your location.

HOURLY RATE: \$60 per hour for telephone consultation, and general design work. \$30 per hour for computer drafting services on the security and self-sufficiency details I will provide for your design.

PERCENTAGE FEE SCHEDULE: (for full service custom designs--which I'm currently not doing) 6% of the first \$100,000 of estimated construction cost, 5% thereafter. 15% of the total estimated fee is due upon completion of the preliminary plan, 35% upon completion of the structural design phase, and the final 50% after completion of the final working drawings.

One final note: If your finances are very limited and you can only afford partial design services, please let me help you on the *beginning* portion, rather than at the end where changes of design or location that I may recommend are much more costly and frustrating to implement. For those with very limited budgets, it is most cost effective to select a stock plan from one of the hundreds of books available and let me help you modify it for selfsufficiency and security. I hope to be able to serve you in bringing your selfsufficiency plans to fulfillment.

Joel M. Skousen

Did you know?

The Russians are building tremendous new nuclear/biological and chemical weapons systems--all with the assistance of US technology transfers. They are deploying on average, 3 new Topol-M 6th generation ballistic missiles per month. We built our last MX over 10 years ago, and are disarming unilaterally. Further, the Russian are building huge underground nuclear bunkers and weapons production facilities in the Ural Mountains, clearly intended to function during a nuclear war. The US intelligence community (under both Republican and Democratic administrations) knows this and are actively covering for the Russians, so the American people won't become alarmed.

Both Republican and Democratic administrations have been supplying the Chinese with high technology weapons systems for years, knowing that they, in turn, are supplying other enemies (Iran, Iraq, India, North Korea) as well. Both Russia and China continue to protest against any US anti-ballistic missile system, even though such systems are purely defensive. It doesn't take a genius to understand that ABM systems only threaten someone who intends to launch ballistic missiles someday.

President Clinton directed our military to absorb a nuclear first strike rather than "launch on warning" (our only true deterrent to a first strike) and to prepare to "retaliate" afterward. That first strike will take down all command and control, all bombers (since none are on alert), most missiles, and all satellite and submarine communications.

According to the House Armed Services Committee, the following reductions have taken place during the Clinton Administration: Strategic and General Purpose Forces from 1990 to 1997: B-52 Bombers have gone from 220 to 56. B-1 Bombers from 90 to 60; Strategic Defense Interceptor Aircraft from 36 to 0; and Army Divisions (1990 to 1997) have gone from 18 Active down to 10. Reserve divisions have gone from 10 to 8. Army Brigades (1990 to 1997) have declined from 8 Active to 3 and Reserve brigades have gone down from 27 to 18.

Joel Skousen's [World Affairs Brief](#) attempts to track the insider moves underlying the major stories you hear each week. The WAB is not a primary news source--but rather, the best source of news analysis. Joel's purpose and strong point is to help you see how world and national events are shaping up in accordance with the secret agendas of men and groups who control government. The [World Affairs Brief](#) puts together the probable set of intentions and motives of the power elite by inductively cataloging their specific actions over time.

What will you do about it?

What is the risk to you and your family if there is a major terrorist attack on a U.S. city with chemical or biological weapons? What will you do?

Did you know the US, by policy, will not retaliate on warning of a nuclear attack --effectively removing any deterrent? Are you prepared if the "unthinkable" happens—nuclear war?

Have you considered what you will do if an economic crisis threatens your pensions, investments and other so-called "guaranteed" income?

What about a major earthquake or other natural disaster suddenly upsetting the natural social order for months at a time? Could you get out of harm's way if massive social unrest erupts in the wake of a crisis? What about your home? Do you have extra tanks of potable water should public water supplies be cut off or contaminated? Would you know how to collect and filter your own water if none was available for a long time?

Joel Skousen is a world-renowned expert in home security and Constitutional law. Joel, who publishes a [weekly comprehensive analysis of world affairs](#), is also the author of books on home security, [law, and government](#). His latest two books, [The Secure Home](#) and [Strategic Relocation--North American Guide to Safe Places](#), address the myriad economic, biological, and political threats that face families living in today's complex world. The books also serve as guides for families wishing to relocate to a more secure area and become self-sufficient. In addition, Joel is available to consult privately with individuals to design high security residences and retreats, or to develop contingency plans for emergency situations. Please email the [Webmaster](#) if you have any questions or problems with the website. You can reach Joel Skousen at his email, Joel@JoelSkousen.com, if you have any questions about his work.

[World Affairs Brief](#)

Get Joel's incisive weekly analysis of world and national news--only \$24/year and it comes **every week** to your inbox. His specialty is to track the tactics and hidden intentions of globalist insiders who are maneuvering the world into a New World Order. The World Affairs Brief button on the left will take you to sample issues, and the [Best of Foreign and Domestic Briefs](#). There are also links to background information and evidence on the insider's agenda to undermine the free world. Subscribers have access to a private forum to discuss these issues with Joel one on one. It's the best newsletter bargain on the Net.

[Strategic Relocation](#)

Even though there isn't any single guaranteed safe place in the world, some places are much safer than others. Joel has been all over the Western world and has advised people on relocation issues for over 20 years. Learn about the major threats we face as we move into the new century. Get Joel's illustrated North American Guide to Safe Places. There's even a free forum for you to add your ratings, insights and opinions about places you have lived or visited. Learn more about rating your present location, choosing a safe place to live and developing contingency plans for a retreat if you can't relocate.

[The Secure Home](#)

Sooner or later in this trouble world, everyone is going to need some form of security and self-sufficiency in their home. Joel has designed high security homes and retreats for clients for over 25 years and offers lots of practical ideas for remodeling and new construction. Check out his 700 page how-to manual, The Secure Home. It covers everything from A-Z in security and self-sufficiency. Walk through Joel's process for analyzing your home's needs. Check out your options. His multi-use, in-house high security shelter designs are one of his most important contributions to high security architecture.

[Foundations of the Ideal State](#)

Join with Joel and other conservatives of liberty in the quest to forge a new Constitution of Liberty, modeled after the best principles of the US Constitution, but written in tight legal language. Joel is writing a definitive work on Law and Government and is in the process of posting major sections of his book on this discussion forum. He invites you to read and offer comments and criticism. Feel what its like to join with other activists for liberty in hammering out the Foundations of the Ideal State

Recommended Equipment and Sources--Online Update

Updated July 20, 2000

Copyright notice. This section of the book is to update the hard copy for those who have purchased The Secure Home. Visitors to this site are free to view the material, but should not copy it unless they have purchased the book. You're on your honor, as I have no way of enforcing this. Hopefully, through this sample you will realize how valuable the 700 page book is.

I have not included many conventional products for building here, but rather have concentrated on those less conventional items that I have commented about during the text. I have used many of the products mentioned here. However, there are many items that I have not had personal experience with. I have attempted to judge these within the limitations of written claims, but you should use your own judgment as well in evaluating their suitability to your needs. I make no guarantees about the performance or reliability of these products or services. Surely, there are other similar products to the ones I have mentioned that may be available and yet unknown to me. Because they are not mentioned does not mean that they are not acceptable. If they follow the general criteria given, feel free to consider them. If I have time, I can try to check out a product of interest to you, if you will provide me some relevant sources or descriptive information. Any feedback you have, negative or positive, about any of these products will be appreciated.

This page also provides the source information for those who have the booklet 10 Packs for Survival. If you find errors here or see web addresses (URL) that do not function, please inform me by Email at joel@joelskousen.com

PRODUCT SUPPLIERS

Here is a list of suppliers who carry a variety of items mentioned in this list. To save space, I will only mention their name as a source within the list, instead of giving out their address and telephone numbers each time they are mentioned. Check here for contact information if it isn't listed in the body of the list. In most cases I will try and give an Internet website URL (URL means an Internet address, usually preceded by a www). Going to a company website will allow you to view the product and read important information. This will save you much time and effort.

ABRAHAM SOLAR EQUIPMENT: This is my top recommended source for all your solar and alternate energy products. Mick has low prices and he knows all the equipment personally, including how to install it. Above everything, I can personally vouch for Mick Abraham's honesty and integrity. This is a source you can completely trust. Order line: 1-800-222-7242, Free consultation (970) 731-4675; address: 124 Creekside Place, Pagosa Springs, Co. 81147.

J & A SPECIALTY PRODUCTS: (801) 224-9139. My two sons Jerome and Andrew are buying some limited specialty items that are not being carried by other survival stores and which are hard for my readers to find, without having to deal with some awful multi-level sales system or buy in large wholesale quantities. They will be selling these items at a small profit margin mostly for your convenience. The items they will help you buy are denoted by term "J & A Specialty".

EMERGENCY ESSENTIALS: Largest of the Utah-based full service preparedness products stores. Website URL: www.emergencyessentials.com Tel: 1-800-999-1863 Address: 165 South Mountain Way Drive, Orem, UT 84058.

MAJOR SURPLUS AND SURVIVAL: Biggest of the California survival food and products stores. Website URL: www.majorsurplusnsurvival.com. Address: 435 W. Alondra Blvd.; Gardena, Ca 90248 Tel: 1-800-441-8855.

NITRO-PAK: Carries a full line of survival foods and products. Website URL: www.nitro-pak.com.

WALTON FEED: Largest of the survival food suppliers. Walton Feed, 135 North 10th, P.O. Box 307, Montpelier, ID 83254. Tel: 1- 800-269-8563.

LEHMAN'S CATALOG: The largest of the self-sufficient/back-to-the-land suppliers. URL: www.lehmans.com. Address: Lehman's Non-Electric Catalog Listing ID 575. Phone: 330-857-5757 Fax: 330-857-5785 Email: getlehmans@aol.com Mail: Lehman's, One Lehman Circle, P.O. Box 41, Kidron, OH 44636 USA.

ALTERNATE ENERGY ENGINEERING: California-based company. Website URL: www.asis.com/aee/

JADE MOUNTAIN showroom: 717 Poplar Ave., Boulder, CO. Address: P.O. Box 4616, Boulder, CO 80306. Website <http://www.jademountain.com>. Call: 800-442-1972 Tech Support: 303-449-6601 Fax: 303-449-8266. Jade Mountain is a very large alternate energy store that sells almost everything.

AMATEUR ELECTRONIC SUPPLY (AES): Biggest of the Ham radio and antenna stores. Order their catalog: 1-800-558-0411.

HAM RADIO OUTLET: 1-800-644-4476 (east) or 1-800-854-6046 (west). Second biggest ham radio and equipment stores. Order their catalog.

RADIO SHACK: website www.radioshack.com. Nationwide electronics parts, radios, telephones, and security systems. order line: 1-800-843-7422 (get a catalog at local store or see it online).

WW GRAINGER: Nationwide wholesalers of almost every type of equipment. You must have some type of business in order to establish a wholesale account with them, but it is worth it. Check their website for the warehouse nearest you: www.grainger.com.

NORTHERN TOOL AND EQUIPMENT: Major discount mail-order catalog company. Website: www.northern-online.com or 1-800-533-5545.

HOME IMPROVEMENT STORES TO PURCHASE ITEMS AT A DISCOUNT

COSTCO WHOLESALE: See website for location of stores nearest you: www.costco.com. They are in 26 states East and West (no midwestern locations yet). Chain discount bulk supplies of household products and services.

SAM'S CLUB (WALMART CHAIN): Nationwide chain carrying bulk supplies at discount prices.

HOME BASE: Ten Western states. Discount priced home, hardware, and garden supplies. Website URL: www.homebase.com.

HOME DEPOT: Largest national home improvement store chain. Website URL: www.homedepot.com.

LOWES: Eastern-based home improvement discount store, second largest in the nation. Recently merged with EAGLE HARDWARE to gain a western base.

LISTINGS

NOTE ON PRICING: Prices listed were current in January, 2000. They will almost always be slightly higher when you order, after this date. Venders listed are not obligated to honor the prices I have listed.

CONSTRUCTION MATERIALS AND EQUIPMENT

GROUND SOURCE HEAT PUMPS

SunQuest, Inc. 1555 Rankin Avenue, Newton, NC 28658 USA

Tel: 828-465-6805 Fax: 828-465-7370.

WaterFurnace International, Inc. 9000 Conservation Way, Fort Wayne, IN 46809 USA

Tel: 800-222-5667.

PLASTIC LUMBER DECKING

Energy Conservation Products, Inc. 4411 Bee Ridge Road, #344, Sarasota, FL 34233 tel: 888-329-2705

Black Rhino Recycling, Inc. 4503 Lebanon Church Road, West Mifflin, PA 15122 USA Tel: 412-460-0160. URL: <http://nauticom.net/www/arhino/>

Resco Plastics, Inc. 1170 Newport Avenue, Coos Bay, OR 97420 Tel: 541-269-5485.

STEEL DECKING FOR FORMING UP SHELTER CEILINGS:

FormDeck Comes 36" wide in variety of lengths. Contact Structures of USA, P.O. Box 639 Johnstown, PA 15907 Tel: 814-536-8371 URL: <http://www.structuresofusa.com/> Many other brands of steel decking are available at local steel suppliers in most large cities. Deal locally to avoid shipping costs.

SHATTERPROOF WINDOWS AND SKYLIGHTS

Roto Frank (German made) high strength skylights. Available in US at skylight distributors.

Andersen Windows makes a triple laminate glass with polymer layers in between. These windows are intrusion-proof, and will not scratch like Shattergard film. This is the glass system they use on their high strength (hurricane-proof) skylites. You can order this glass in their regular window line as well. Cost is about 30% higher than standard glass/wood windows. Andersen Windows (available at window suppliers everywhere).

STAIR-STEPPED MODULAR WINDOW WELL (for fire escape)

Scapewell by The Bilco Company: URL: www.bilco.com. The Bilco Company, P.O. Box 1203, New Haven, Connecticut 06505 Tel: 203-934-6363.

INSULATING WINDOW FILMS/INSULATION

Window Coverings Company sells an interior acrylic magnetic window panel that will make a home more livable during cold weather. These panels are easily removed and can be painted for use as black out interior shutters. They will save over 40% on your fuel bills. Email them at Eaglemarket@webtv.net.

CLEAR VINYL PLASTIC FOR WINDOW REPLACEMENT

This product used to be made by Rubbermaid Coporation URL: www.rubbermaid.com. but is no longer being carried. The product was called All Purpose Vinyl and came in 54" wide rolls. It was great for

stockpiling in case windows get broken in storm or earthquake. It is nearly indestructible and perfectly clear. I'll will try and locate an alternate source. Email me if you find one. (joel@joelskousen.com)

QUILTED DECORATIVE INSULATING CURTAINS FOR SOLAR WINDOWS

TAIOWA, 1-800-347-6170 They sell both the rolling interior quilted shades or the solid panels for window coverings.

FOIL INSULATION

Astro-Foil comes in two styles: Astro-Foil itself is two-ply bubbles with three layers of aluminum, and is about 5/16 of an inch thick. Astro-E is single-ply bubble material with two layers of foil, about 3/16 of an inch thick. It comes in 50-foot rolls that are 1, 2, 3, 4, and 5 feet wide and 125-foot rolls in 4 and 6 feet wide. Prices vary, but the only supplier is Innovative Specialities 1440 W. Douglas Ave, Wichita, KS 67201. Tel: (316) 265-6712 URL: www.innovativebldgproducts.com

ALI Industries. ALI Industries offers Multi-layer aluminum foil insulation for the highest R value.

Reflectix, found at home-improvement outlets. Reflectix, however, does not carry Uniform Building Code stenciling, required for commercial structures. It's primarily used by do-it-yourselfers. A 4 by 50-foot roll of Reflectix at Eagle Hardware is \$124.95. The same size of Astro-Foil is \$126 and Astro-E is \$122.

SOUND INSULATION

Insul-Tek and O.E.M. Sound Deadener, self adhesive automotive stype sound-proofing. This is very compact, effective material. Call Juliano's to order. Orders: 800-300-1932 Technical Assistance: 860-872-1932. Insul-Tek 1/4" thick core of polyethylene foam with aluminum foil bonded to both sides. Will not absorb moisture. Reduces noise level by 40%.

SONEX Professional quality deep finger foam for shooting ranges. Ilbruck Inc, 3800 Washington Ave North Minneapolis, Mn 55412. Tel (612) 521-3555.

ADD-ON PROTECTIVE FILMS

Shattergard Protective Film (unbreakable backing to standard glass). It can be applied to existing house and car windows. Makes windows bullet-proof to small caliber (.22) weapons and makes windows impenetrable to intruders. www.shattergard.com.

FIREPROOF SHEETROCK

In the 1980's a woman invented real fireproof plaster that was vastly superior to type XX sheetrock (which merely sloughs off during a fire. The product is called GEOBOND, and comes in panels as well as a stucco-like exterior coating. It can be used in combination with many other materials. Website: www.geobond.net. This is a truly amazing family of products.

FIREPROOF PLYWOOD

Plycem. This is a recycled material which has higher densities than all other sheathings. It is marketed by Castleblock P.O. Box 1893, Ventura, CA USA 93002 Tel: 800-672-7872 Website: <http://www.castleblock.com>.

STRUCTURAL BUILDING PANELS

R-Control Structural Building Panels. factory-made wall systems that replace wall framing. AFM Corp. <http://www.afmcorp-epsfoam.com> 1-800-255-0176.

FOAM BOARD WITH OSB ATTACHED NAILING SURFACE

R-Control Speclam (insulation foam attached to particle board) AFM Corporation 24000 West Highway 7, P.O. Box 246 Excelsior, MN 55331 Tel: (612) 474-0809 or 1-800-255-0176 Fax: 612-474-2074

EIFS (EXTERIOR INSULATED FINISH SYSTEMS)

Exterior insulated finish systems (EIFS) consist of synthetic stucco applied over insulation board, which is then installed over sheathing. These systems have been used commercially for years, but they received some bad press recently when homeowners complained that these systems were failing. Moisture penetrated the wall and the sheathing and structural members rotted. While manufacturers, contractors, and homeowners swap complaints, drainable siding is entering the picture. Manufacturers say that this system allows moisture that gets behind the stucco to drain harmlessly to the outside.

Dryvit: website: dryvit.com. Tel: 800-556-7752. Dryvit Systems, Inc. One Energy Way, P.O. Box 1014 West Warwick, RI 02893.

Pleko See website at www.pleko.com (Dryvit substitute; more competitive in price.)

CHEAPER ALTERNATIVE TO EIFS

The QUIKRETE® Hardcoat Stucco System provides builders and contractors with unparalleled durability and moisture protection that is lacking in Exterior Insulation and Finish Systems (EIFS). The Hardcoat Stucco System is comprised of QUIKRETE Liquid Stucco decorative coating over a base coat of QUIKRETE Fiberglass-Reinforced Stucco. Unlike EIFS, where water may become trapped between a synthetic finish coat and the interior drywall, Fiberglass-Reinforced Stucco acts as a drainage medium. If water penetrates the top coat of Liquid Stucco, it will migrate down the base coat and out through a flashing at the concrete footing. The Hardcoat Stucco System combines the design versatility and energy efficiency of EIFS with the durability and water drainage benefits of cement-based systems. Fiberglass-Reinforced Stucco is reinforced with alkali-resistant glass fibers. It provides a high impact, crack-resistant shell and can be trowel or spray-applied at a 3/8-inch thickness using wire mesh over insulation board or sheathing. Fiberglass-Reinforced Stucco also provides the ideal base for the Liquid Stucco decorative coating, which is a moisture-resistant color and texture coating designed for use over concrete and stucco surfaces. This ready-to-use and trowel-applied product is a 100 percent acrylic co-polymer-based coating. It is available in swirl, coarse sand, and fine sand textures and can be pigmented to any desired color, thus offering unlimited design options. This system can also be used over the concrete stack-block method. URL: <http://www.quickcrete.com>.

ELECTRICAL, MISC

GFCI (Ground Fault Circuit Interrupter). Installing a GFCI outlet for your washing machine for shock protection is worthwhile. However, some GFCIs might trip every time the motor is activated. To prevent this type of nuisance tripping, the Leviton Manufacturing Co. indicated that you should get the Hospital Grade GFCI outlet rather than the regular commercial grade. The catalog number of this part is 6598-HG, and it's available at commercial electrical supply stores.

FIXING BASEMENT CRACKS

Most use hydraulic cement (rigid). For a better job, fill the crack on the inside using a tough, but flexible professional-grade sealant such as SIKAFLEX 1A. Prepare the crack according to the manufacturer's instructions, then coat it with Sikaflex primer 429 and apply the Sikaflex-1a. Finish up by covering the repair with SikaTop Seal 107, a polymer-modified, cement-based coating. A 10.3-ounce cartridge of Sikaflex-1a costs about \$5, a pint of primer about \$12.50 and the SikaTop Seal about \$40. Bear in mind that these products are not sold at home centers or hardware stores. They are sold through construction supply houses, some of which are reluctant to sell less than case-size quantities to a homeowner. So the prices of individual cartridges or cans may vary from what we show here. For more information, contact SIKA CORP. 201 Polito Ave., Lyndhurst, NJ 07071; 800-933-7452.

GREENHOUSE MANUFACTURERS AND COMPONENTS

Conley's Mfg. & Sales 4344 E. Mission Blvd., Montclair, CA 91763 Tel: 909-627-0981 URL: www.conley.com (a commercial greenhouse manufacturer. Will send components to you as well as twinwall glazing at wholesale rates).

Nexus Corp. 10983 Leroy Drive Northglenn, CO 80233 Tel: 303-457-9199 URL: www.nexus.com (A commercial greenhouse manufacturer. Will sell components to you as well as twinwall glazing at wholesale rates).

PLASTIC GREENHOUSE FILM

Armin Plastics Corp. 18901 East Railroad Street City of Industry, CA 91748 Tel: 800-654-8119 URL: <http://www.armin.com> (supplies a full range of single layer plastic, UV protected greenhouse coverings - suitable for warmer climates).

STRUCTURAL METAL COMPONENTS (aluminum square tubing, round tubing etc)

Allied Tube & Conduit 16100 S. Lathrop Ave. Harvey, IL 60426 Tel: 800-882-5543 URL: <http://www.allied.com>. Also available at steel/metal supply houses in all major cities.

DEHUMIDIFYING AIR TO AIR HEAT EXCHANGERS

HEAT WHEELS by XeteX, Inc. 3530 E. 28th St.. Minneapolis, MN 55406 Tel: (888) 899-9991 Toll Free. (These unique spinning wheels have water absorbing media on the blades which transfers humidity from incoming fresh air to the outgoing stream of exhaust air.)

WATERPROOFING MATERIALS FOR BASEMENTS, UNDERGROUND HOMES

SODIUM BENTONITE (For waterproofing underground rooms, shelters, homes)

Black Hills Bentonite Box 9, Mills, Wyoming 82644 URL <http://www.bhbentonite.com> Email: bhbentonite@doccee.com. You can also find bentonite pellets at almost any well drilling outfit.

Paraseal (HDPE) Waterproofing Membrane (from W.R. Grace Co, and national firm. Local construction firms can get this product). Paraseal is a dual combination of two of the most effective waterproofing materials, high density polyethylene (HDPE) and bentonite clay, laminated together to form a tough, single sheet membrane. It is easily installed and typically applied on backfilled wall conditions, under floors, decks, or as a pond liner. The Paraseal dual membrane system is also available in a lagging grade, Paraseal LG, which is designed for blindside installations or where shotcrete is to be blown directly into the face of the membrane.

Bituthene Heavy duty waterproof membranes that can literally surround the outside of a basement (even under slabs and footings) to make a basement waterproof in a high water table area. Bituthene 1000x by W.R. Grace Co. (available through local concrete contractors).

Vulkem 201/222 are also ideal for waterproofing foundation walls. By Tremco Incorporated 3735 Green Rd., Beachwood, OH 44122 Tel: 216-292-5000 or 800-321-7906.

WATERPROOFING FOR DECKS

Vulkem #350/351 Pedestrian Deck Coating System. Tremco Incorporated 3735 Green Rd. Beachwood, OH 44122 Tel: 216-292-5000 or 800-321-7906.

CUPOLAS (special decorative vent housings that go on top of traditional styled roofs and barns)

Stephenson Cupolas and Weathervanes. Nashvilled Sash and Door, Tel: (615) 254-1371

Edon Fiberglass Cupolas. 1-800-255-0176, URL www.edon.com (These are indestructable vents and never need maintenance).

CONSTRUCTION TYPES: ALTERNATIVE
INFORMATION ON CONCRETE HOMES
www.concretehomes.com

PRECAST CONCRETE

Thermomass Residential Building Systems. (The best residential system in the world - uses a thermal sandwich of foam in between two concrete precast surfaces. Has heat mass characteristics, rodents cannot get into the foam layer, bullet-proof, and the best sound-proofing available) 1999 Highview Rd. Coralville, IA 52241 Tel: (319) 351-4232 Fax (319) 351-0993 Website: www.t-mass.com.

Kistner Concrete Products, Inc. (Prefab security buildings, precast basement foundation systems) 8713 Read Road East Pembroke, NY 14056 Tel: 716-762-8216 Fax: 716-762-8315 Website: www.kistner.com.

Tierra Concrete Homes P.O. Box 1924, Pueblo, CO Tel: 719-947-3040 Fax: 719-947-3050.

Oldcastle Precast Custom precast water-proof concrete tanks. Can combine these to make drop-in-the-ground shelter systems. Contact: Oldcastle Products, 2820 A Street, SE Auburn, WA 98071-0608 Tel: 253-833-2777 Fax: 253-939-9126 or 888-232-6274. Website: www.oldcastle-precast.com They have local manufacturers all over the USA.

PRECAST CONCRETE SLABS (AIR CORE CONCRETE)

For use as flooring systems or roofing systems. Duct heat or cooling air into the floor tubes. FLEXICORE brand slabs are available in all states. Check with commercial concrete contractors.

THERMAL MASS CONCRETE BLOCK CONSTRUCTION

ARCHITERRA These designers and builders have the most experience in heat mass - passive solar homes. Their system is applicable to most areas of the country, but especially the West. I don't agree with all their techniques or their pricing commissions, but you can learn a lot from their information and implement what you want on your own. They cover waste treatment systems, earth sheltered homes and buildings, solar air heating systems, composting system components, indoor gardening/attached greenhouses. Silverthorne, CO 80498 Tel: 970-262-6727 Website: <http://www.vail.net/~natural>.

DOMES UNDERGROUND HOMES

All of the following companies have been in business over 20 years, so they know what they are doing.

Nest Egg Homes (an underground system using concrete dome or tunnel type structures) Formworks Building, Inc. P.O. Box 1509, Durango, CO 81302 Tel: 970-247-2100 URL: www.formworksbuilding.com.

The Terra-Dome Corp. Underground or bermed building. Tel: 1-800-481-3663.

Davis Caves Construction, Inc. P.O. Box 69, Armington, IL 61721 Tel: 309-392-2574.

CEDAR HOMES

International Homes of Cedar (Laminated Cedar Homes) P.O. Box 886, Woodinville, Wa 98072 Tel: 360-668-8511 or toll free 800-767-7674.

LOG HOMES

There are hundreds of log home companies. However, it has been my experience that log home suppliers in the Eastern US are almost double the price of western log home suppliers. Call for price comparison with the company below to see how your local dealer compares. Often it is much cheaper to ship log kits from the west than buy in the east.

Real Log Homes Hartland, VT and throughout the Eastern States (800) 732-5564 Compare prices with the West.

Timberline Log Homes 915 N. State St. Orem, Ut 84058, (801) 226-8786. This is the company I use as a reference for a fair price. I have consistently found this outfit to be very competitive and fairly priced. Check your prices locally and then give the same specs to this company to see how they compare. In many cases, it has been more economical to buy from Timberline, and ship to the East coast than to buy in the East.

ICF (INSULATED CONCRETE FORMS)

The Portland Cement Association has introduced both a book on building with insulated concrete forms (known as ICF construction), and a 5-part video series on the topic. The 326-page book, *Insulating Concrete Forms*, (\$60 postpaid) is a highly detailed look at these systems, from design through installation to completion. Numerous section and perspective views of various ICFs are given. If you're considering building with an ICF system, the book is necessary reading. The video series (\$65 postpaid) doesn't provide detailed information, but it gives a realistic overview of ICFs, since much of its 80 minutes was filmed at construction sites. The five videos are design, planning, setting forms, placing concrete, and utilities/interior finish. Contact the Portland Cement Association, 5420 Old Orchard Rd., Skokie, IL 60077.

THERMALITE: 1-800-500-4898. website: www.thermalite.com. Flat foam forming system tied together with plastic ties. One of few systems that can accommodate concrete walls up to 14 inches wide. One has to put together the forms - do not come as blocks, thus allowing much wider variety of wall widths. Bracing system must be rented or purchased from them - highly recommended.

BLUE MAX: One of the only foam block systems that allows an 8" wide, full-width concrete wall.

AAB Building System, Inc. <http://www.bluemaxxaab.com> Address: 840 Division St., Cobourg, Ontario K9A-4J9 Canada Tel: 800-293-3210 Fax: 905-373-0002.

SMARTBLOCK Use variable width form only - gives solid wall thickness up to 8." Pre formed blocks with integral ties. Plastic ties are built into foam, recessed 3/4" from outside (makes them a little harder to reach for attachment purposes). **CONFORM** website: www.smartblock.com Call 1-800-CONFORM for distributor nearest you.

LITEFORM: (Flat foam - have to build it up yourself, so it takes longer) Lite-Form International is headquartered at 1210 Steuben St., Sioux City, IA 51105 Tel: 712-252-3704 Fax: 712-252-3259 Toll Free in North America 1-800-551-3313 website: www.liteform.com. Email: general@liteform.com

QUADLOCK (Flat Foam forms - install ties yourself) Website: www.quadlock.com. Address: QUAD-LOCK Building Systems Ltd. 7398 132nd Street Surrey, B.C. V3W 4M7 Canada Tel: (888) 711-LOCK (604) 590-3111 Fax: (604) 590-8412.

READI-FORM: Flat foam forms - put together on site. Website www.readi-form.com.

Readi-Form 12 W. Oakland Ave. Oakland, NJ 07436 Tel: 201-405-2030 or 800-334-4303 Email: Info@readi-form.com.

CUSTOM MODULAR HOMES

Avis Homes, Avis, Pa. To give you an idea what you can expect when going modular without having that modular look, Popular Mechanics followed construction of this 4500-sq.ft., 10 room, two story, \$739,000 luxury home in Wilton, Connecticut. This house was custom-designed by the contractor, R&R Lindentree Assoc., in Wilton, along with engineers from the builder, Avis Homes, in Avis, Pennsylvania. Once the plans were finalized, Avis used their CAD system to come up with the finished design. The main structure of the house consists of seven modular boxes, each having an average weight of some 32,000 pounds. The front of the house was anchored to a conventional poured concrete foundation with primary footings seated on a rock ledge. The foundation was accurate in height and square to 1/16 in.

STORAGE SHIPPING CONTAINERS (Insulated Reefers) about \$2200 plus shipping. Equipment Service Storage 7226 North Loop East Houston, Tx 77028 Tel: 713-674-1082 Dallas Office 214-374-3995. Check locally as well. There are many outlets across the nation for these containers.

DC OR AC ELECTRICAL EQUIPMENT LOW VOLTAGE LIGHTING SYSTEMS

Lite Touch, Inc Salt Lake City, Utah Tel: 801-268-8668.

LINEAR CURRENT BOOSTER (for using solar panels to run a water pump or motor directly)

Sun Selector LCB 20 (about \$400) Abraham Solar Equipment

DC LOAD CENTER

Alternate Energy Engineering #530075 (about \$165) Abraham Solar Equip.

AC-DC POWER CONTROL CENTER

Trace Power Center Combines all meters, fuses, circuitbreakers, and connections into one unit - code approved. Custom built for each application, about \$2000. Buy from Abraham Solar.

DC-AC SOLID STATE INVERTER

TRACE CORPORATION (Abraham Solar)

A. For 12 volt application (small) Trace Model UX 612 (about \$550) 800 watts, 2400 surge.

B. For 12 volt applications (large) Trace Model 2512SB (about \$1500) with battery charger.

C. For 24 volt DC to 240 volt AC installations (2) Trace SW4024 (about \$2500 each).

BATTERY EQUALIZER SYSTEM (for combining 12 volt batteries and a 24 volt battery system)

Vanner model 60-50A (about \$500) Abraham Solar.

BATTERY MAINTAINERS

SCHUMACHER SE-1125 Automatic Battery Charger/Maintainer (keeps battery at a perfect float charge without overcharging) about \$25 from Walmart and other auto parts stores. Never use a "trickle charger." Trickle chargers do not turn off and on to keep a float charge - they will overcharge the battery and ruin it eventually.

BATTERY DESULPHATER

Sulphation of the lead plates occurs on all batteries over time. There is one technology that keeps batteries from sulphating and one that can remove sulphation once it occurs. Both types are produced by PULSETECH. One is the PowerPulse unit which zaps the battery every few seconds with a sulphate busting charge. This keeps good batteries going much much longer (about \$65). The second is the Solargizer. This unit actually desulphates batteries by putting out a certain frequency that makes the crystalline sulphate go back into solution. It comes with a small solar panel to work in the sun (\$60) but

also comes with a plug in adapter (about \$99). I always buy the adapter types since it is hard to always keep something in the sun. With the 110v adapter and the solar panel, you have both options. Abraham Solar sells these. They do work and they are worth the money.

STORING SMALL BATTERIES

Carbon Zinc batteries store longer in cold temperatures since the coolness tends to stabilize the chemicals inside. As a result people continue storing their batteries in the refrigerator even though different batteries have come on the market that do not receive the same benefit from cold storage. Alkaline, Mercury, and Lithium batteries are very chemically stable and if the humidity inside the fridge is too high, they could experience more corrosion than benefit from the coolness. In a high moisture environment, the positive and negative poles can experience some migration of current due to salts in the moist air, which causes them to slowly discharge. Modern batteries will keep just as well in a dry cool basement as in a fridge. Lithium batteries have a gas that can leak, so don't store large quantities of them together inside a sealed container like an ammo can.

DEEP DISCHARGE STORAGE BATTERIES

6-volt Golf Cart Batteries (about \$49 each) cheap source (Costco Wholesale or Sam's Clubs).

12 volt Lift Truck Batteries POWER FLOW brand, Abraham Solar Tel: 800-222-7242.

TROJAN L-16 and L-16HC from Abraham Solar Tel: 800-222-7242.

2 volt Industrial Cells. Buy from Abraham Solar Tel 800-222-7242.

AGM (absorbed Glass Matt) batteries. Heavy duty, high amperage delivery capacities without ruining battery. Optima or Lifeline batteries are 2 prominent brands. Check with Abraham Solar or an internet site like <http://www.dcbattery.com>.

2 Volt Submarine Batteries: Will last about 30 years, 7000 amp-hours per cell, about \$3000. Takes 6 cells to make one giant 12 volt battery. Call (508) 584 5997. These are somewhat cheaper than the 2 volt industrial batteries mentioned above. I have no references on this source, so if you deal with them, make sure you arrange to pay COD to make sure you get your \$18,000 worth of batteries before you pay. Let me also caution you that a battery bank this large is too big for a normal house. The self-discharge of this much battery potential alone will need one or two solar panels to just keep the batteries at float. Second, you would have to have at least 200 to 400 potential amps available to charge these batteries to keep stratification of the acid from occurring. But for very large installations or for multiple homes, this looks like the best quality for the cost available.

HYDROCAPS

These units condense the water vapor out of battery gassing so you don't have to water as often. Get them from Abraham Solar 1-800-222-7242.

JUNCTION BOX

For solar array connections - contains SOV lightning arrestor. Model 53-911 from Abraham Solar.

POWER DISCONNECT, FUSED

#52-600 (2-POLE, 60 AMP) Abraham Solar Equipment.

FUSE BOX

#53-290 fuse block for 60 amp fuse. Use Class R fuse (3) FRN60 from Abraham Solar.

WIRING SIZES (these will vary according to specific installation, but this should give you a general idea for a small to medium installation)

Solar Panels to J-Box #6 stranded copper.

J-Box to APT Power Center or Charge controller: (2) #2 stranded copper, 1 #6 stranded copper for external ground connection.

Battery interconnect cables #2 stranded copper (Abraham Solar) or auto supply stores.

Battery bank (last connection) to Inverter: #2/0 stranded copper, preferably welding wire.

Grounding cable: 1" wide braided copper.

12/24 VOLT FLUORESCENT LIGHTING

THINLITE Corp For 12 volt systems: use #197 (36" long) or #139 (48" long) fluorescent. For 24 volt systems use model numbers #297 or #239, same cost - about \$65) from Abraham Solar or local RV supply stores carry Thinlite Products.

WHITE LED LIGHTS

WHITE LED FLASHLITE (Lasts over 100 hours on 3 AA batteries - a must have item: a best buy at \$25 from Abraham Solar at 1-800-222-7242.)

18 LED SURFACE MOUNTING LIGHT "Super Nova" available in 12,24, 36, 48 volts. A best buy at \$80 from Abraham Solar at 1-800-222-7242.

12v LIGHT BULBS (price depends upon quantity - call Abraham Solar or local RV suppliers)

12 VOLT BATTERY CHARGER

Radio Shack, model 23-139

12 VOLT VENTILATION FANS

Best all-around choice is the DAYTON brand 12 volt fan from WW Grainger Stock # 2C646. About \$46, 175 CFM and fairly quiet. A noisier, high rpm fan is by ITT JABSCO BRAND, also sold by W. W. GRAINGER, Stock # 4C814 (not for continuous duty - do not run more than 60 minutes at a time. This is an acceptable restriction as this fan will replace all the air in your shelter in less than 10-15 minutes). What makes these fans convenient is their 3" flange which allows you to easily attach it to the vent pipe shown in my shelter designs. The quieter DAYTON fans need to have a flange adapter attached, which you can adapt from sheet metal duct parts available at most home improvement stores.

FUEL STORAGE EQUIPMENT GASOLINE STABILIZER

Stabil, found at Pep Boys and other Auto Parts stores.

PRI: Proven #1 For Stability. This is the best stuff available. Use PRI-D & G to stabilize stored fuels. PRI-D & G can keep diesel fuel, kerosene, and gasoline fresh in storage. PRI-D & G can actually restore old fuels to refinery specifications. Yellowstone Trading: (800) 585-5077 URL: www.yellowstonetrading.com/pritreatment.html.

OCTANE BOOSTER: found at auto parts stores (helps rejuvenate old gasoline, so keep several bottles on hand)

DIESEL FUEL STORAGE ADDITIVE

Racor Biocide 1-800-344-3286. An insecticide plus additives to keep diesel fuel from growing algae and other solid organic matter. Call the 800 number to find distributor nearest you.

FUEL TANKS (see Yellow Pages)

FUEL PUMPS (Check under Petroleum Equipment in Yellow pages)

FOOT VALVES Used at the bottom of a suction line. These are available at petroleum equipment dealers or at large plumbing outlets. Here are some sample brands of foot valves.

Simmons model 1402

Merril Series 810, model FV75

Water Ace model RFV75

Brady model SFV75 (plastic)

FOOD STORAGE

NOTES: Best buys in food storage are in bulk dried grains: Wheat, rice, and beans. Due to the shipping weight of bulk foods for storage, it best to buy these items locally. (Shipping will cost you nearly \$30/50 lb bucket, whereas if you can pick it up locally, you can buy wheat for about \$12 for a 50 lb bag.) You can buy large bags of beans and rice at Cosco and at Sam's Clubs nationwide. You can buy bulk wheat in many locations in the West, as indicated below. However, in the midwest few grain growers bag any wheat for consumers. The best bet for people in the Midwest is to join together with a few other families and buy grain in bulk from the grower. Load up your pickup truck with grain, and then package it yourself plastic 6 gallon buckets. Many farmers in the Midwest and Canada have small grain cleaners that can take out the dust and other particles from field grain. Use a spoonful of diatomaceous earth per bucket of grain to kill any bugs.

DIATOMACIOUS EARTH

Available at any swimming pool supply house. It is used as a filter medium. It is also available at many garden stores since it is an effective pest control item (sprinkled on cabbage or lettuce, etc).

SOURCES OF DEHYDRATED FOODS AND PACKAGED GRAINS

Emergency Essentials Emergency Essentials 165 South Mountain Way Drive, Orem, UT 84058. Website: beprepared.com. Tel: 1-800-999-1863.

Montana Chemical Free Wheat Infinet Communications, Inc. 8551 Cottonwood Road, Bozeman, MT 59718 Tel: 406-585-9324 Fax: 406-585-0671.

Lehi Roller Mills Tripple-cleaned hard or soft wheat. Reasonable prices. Contact: (801) 768-4401, Address: 833 E. Main St., Lehi, Ut 84043.

Walton Wheat Full service supply outlet for all types of survival foods and equipment. Very reputable. Contact: Walton Feed 135 North 10th, P.O. Box 307, Montpelier, ID 83254 Tel: 800-269-8563.

NON-HYBRID SEEDS

Territorial Seed Company P.O. Box 27, Lorane, Ore 97451 Tel: 541-942-9547.

Harris Seeds 1-800-514-4441.

Internet sources for hybrid seeds:

<http://www.heirloomseeds.com>

<http://seed.bioreagent.com>

<http://www.mellingers.com>

<http://www.organicseed.com>

OXYGEN ABSORBERS

Military Logmars Plus 12655 Dunks Ferry Road, Philadelphia, PA 19154 Tel: 800-922-1717 Fax: (215) 632-8813.

WATER BARRELS

New 55 Gallon Polyethylene Food Grade Barrels for \$30.00 per Barrel. Call (801)-754-5173 for sources in Utah and surrounding states.

STORAGE BUCKETS

ROPAK WEST Tel 1-800-547-2347 (call to find distributor closest to you).

GENERATORS

SOURCES: Because of shipping weight, the heavier generators are sometimes best purchased from local generator dealers (see Yellow pages). However, always compare price with one of the major mail order generator supply houses. WW Grainger and Northern Tools will supply a wide variety of the cheaper or discontinued generator lines. For the best prices on the high quality units, call Norwall Power Systems Lake Havasu City, Az Tel: (520) 453-4494. These people ship all over the world and are experts - very

good prices, too. They don't sell any junk, and service all major brands (so they know which ones are best for maintenance, too).

MINI PORTABLES

Small suitcase type gensets, less than 2000 watts, that are super quiet and super fuel-efficient:

Coleman Sportsman model 1850 (1.8kw) about \$300. Best buy of the quiet, small gensets that will run all day on 1.5 gal of fuel.

Yamaha EF1000 It is only 1kw but it is very fuel efficient and quiet and runs all day on a gallon of gas. Costs double the larger Coleman brand (about \$700).

Honda EU1000a This is the newest high tech wonder from Honda, but it runs its current through a new high tech inverter - giving excellent sine wave power (but may be a high tech problem in maintenance - and also the most costly - about \$800).

PORTABLES

There are two classes of generators here: the cheap group with flat-head, side valve, lawnmower type engines, and the more expensive group with longer life overhead cam and valve engines. Starting from the best and most expensive to the cheapest, lowest quality here is how I would rank them (from top to bottom):

Kawasaki GE Series Best maintenance history, rugged engines, pressurized oil system, great bearing surfaces - most expensive.

Honda Delux Series Honda is one of those companies with a high quality line, and a medium quality line (the ECON models - don't confuse them).

Generac EXL Series Generac also has a high and low line. The XL or EXL lines have the pressurized oil system "vanguard" engine or the Honda engine.

Kubota AV Series - excellent machines (Kubota always builds nice engines).

Kubota Diesel Gensets Model GL6500 (6.5kw) about \$4500 (Kubota Tractor Dealers).

Generac (cheaper lines)

Winco (cheaper lines)

Coleman Powermate 5kw gas generator - about \$500 (cheapest, moderate quality, but most generator for the money).

STAND-BY GENERATORS

Top to bottom in price and quality:

Kohler simply the best in all regards, and most expensive. Rock solid engines and electronics. Kohler transfer switches rarely fail. Available in Gasoline, LP, NG (or all three) or Diesel.

Onan - second best overall, but some problems with electronic reliability in past) all fuels avail.

Hawk Power (Lester Petter diesel engines - English and Mitsubishi gas/lp/ng engines).

Generac II (8K and above are top quality engines) Best Buy for very good quality.

China Diesel Cheapest of the diesel gensets (buy a spare rebuild kit) and very noisy, but has a good reliability record. Recommend the 8000 Watt S195 Engine, 1800 RPM Brushless Alternator, Continuous Duty, Includes Radiator, about \$3,300 12kw genset \$4,400 China Diesel Imports. Call 800-341-7027 or website:WWW.Chinadiesel.com.

SPECIALTY STAND-BY

TRI-FUEL GENERATOR: For the ultimate in multi-fuel use, you can pay more and get a generator set up for three fuels: Gasoline, LP and NG. Onan or Kohler both have these units perfected. Call Norwall Power Systems, Lake Havasu City, Az Tel: (520) 453-4494.

STEAM ENGINES

5 HP Liberty (from Jade Mountain) \$2,900 Fire Tube Boiler \$3,200 (must buy both an engine and a boiler).

10 HP Independence \$5,700 Horizontal Underfired Boiler \$4,850 (must buy both engine and boiler).

Mike Brown Steam (Small engine system) Max RPM: 700 1.5" bore, stroke is 2.25". crkshaft dia. 5/8" Flywheel dia.: 7.5" Steam intake & exhaust: .25" pipe. Roller bearing endurance limits: 860 lb. static load cap.350 lb. @ 600rpm From Jade Mountain #GN4159 Mike Brown Steam Engine 1HP \$1,050.

BATTERY MAINTAINER

Schaumacher Battery Maintainer, \$25 from Walmart stores, nationwide.

SPECIAL ACCESSORIES FOR GENERATORS

Manual and Auto Transfer Switches for Portable Generators: (\$300-\$500) Master Sales 1251 Mound Ave. N.W., Grand Rapids, Mi. 49504-2672 Call Toll Free 1-888-917-2244 Local Tel: (616) 257-3483.

AUTOMATIC START CONTROLLER GENMATE system monitors batteries and other switches to allow generator to be turned on automatically when water needs to be pumped or batteries charged. About \$400 from Jade Mountain.

SILENCING MUFFLERS FOR GENERATORS

HARCO, Inc Portland Oregon. (503) 244-7571. Harco has 2 levels of silencers: Super Critical (attenuates down to nearly silent) about \$175, and Critical which is about \$140. They also have the same two levels in a "low Profile" unit for small, tight locations. These cost about 25-30% more. All these mufflers are stat-of-the-art silencers, and are very resonably priced. You can afford to stack two mufflers together for super critical needs inside a home. Email at harco1@teleport.com.

HEATING EQUIPMENT

KEROSENE HEATERS

Kerosun DC 100 1-888-537-6786 Most fuel efficient and cleanest burn.

PROPANE WALL HEATERS (VENTLESS)

Martin Industries, Florence Al website: www.martinindustries.com. model MIR12 (1-2 burner) MIR18 (1-3 burners) or MIR30 (1-6 burners) I prefer multiple small units spaced around the house for emergency LP gas heat. Also available in natural gas a "BEST BUY." Home Base stores carry these units.

MULTI-FUEL FURNACES

YUKON Multifuel Furnace (WWW.yukon-eagle.com) Alpha American Co.1000 Ag Science Drive, P.O. Box 20, Palisade, MN 56469 Tel: 1-800-358-0060.

CHARMASTER Products, Inc. 2307 No. 2 West Grand Rapids, Mn 55744 Tel: (218) 326-6768 (Makes combination wood/oil or gas furnaces and even a furnace with a fireplace front on the side.)

WOODSTOVES

Travis Industries, Inc. 10850 117th Place NE, Kirkland, WA 98033 Tel: (425) 827-9505 LOPI high efficiency woodstoves, Avalon Pellet Stoves & Fireplace Xtrordinair lines of Wood, Pellet & Gas hearth heating stoves.

Avalon Wood stoves and Pellet Stoves Website: <http://www.hearth.com/stoveworks/av.html>.

Regency website: www.regency-fire.com. A highly recommended clean-burn stove.

DIRECT VENT GAS/WOOD FIREPLACES

Heat-N-Glo Website: www.heatnglo.com. 20802 Kensington Blvd. Lakeville, MN 55044 Tel: 888-743-2887. Local dealers almost everywhere.

DEDICATED WOOD WATER HEATER

AquaHeater, LEHMAN'S item; #59-841; \$ 695.00 or Domestic Growers Supply (541) 592-3615.

COAL STOKER STOVES

Alaska Coal Stoker Pennwood Stoves, Fireplaces, Etc. West College Avenue, Pleasant Gap, Pa. 16823 Tel: 1-800-598-3995.

CONVENTIONAL HEATING FURNACES/BOILERS

There is an Internet site that lists the government's ratings of appliance efficiency. It is worth checking before you buy. Take note, however, the amount of difference between comparable equipment appliances is relatively small. Everyone is getting into the efficiency act. Check it out at the following address: <http://hes.lbl.gov/hes/ACEEE/intro.html#con>.

AIR TO AIR HEAT EXCHANGERS

XeteX, Inc. 3530 E. 28th St. Minneapolis, MN 55406 Tel: (888) 899-9991 Toll Free or (612) 724-3101 voice mail. URL: www.xetexinc.com (This company has some of the best and most cost effective heat exchangers.)

HOUSEHOLD PREPAREDNESS EQUIPMENT

GENERAL INTERNET ORDER SOURCE

APPLIANCES ONLINE Website: www.appliances.com E-Mail: zupanci@ibm.net Voice & Fax: 440-543-8345. Good, one stop shopping for most small household appliances.

JUICERS

Champion Juicer: (about \$215) from most health food stores.

Vita-Mix: About \$360. Call 1-800-848-2649 for info.

KEROSENE STOVE

ALPACA (about \$79) from Emergency Essentials.

WHEAT/GRAIN GRINDERS-ELECTRIC/MANUAL

Grain Master "Whisper Mill" (about \$260) from Emergency Essentials or Waltons.

Magic Mill or K-Tec "Kitchen Mill" Same machine (about \$225). Same principle as Whisper mill but mill sits over cannister - holds more flour, less complicated, a little less expensive. Same milling mechanism.

Golden Grain Grinder (conventional type of stone mill motorized grinder) Emergency Essentials.

MANUAL GRINDERS

Country Living Grain Mill (about \$350 - expensive) V-groove wheel for quick and easy conversion to electric motor. Cast-iron flywheel for easy turning and smooth flow of flour. Large hopper holds 2 lb. of wheat easy-Dial, self-locking adjustment. Double sealed industrial ball bearings. 30% less torque or energy required to turn than any comparable hand mill on the market. This grain mill is designed to be easily motorized. The fly wheel is grooved for use with a standard V Belt. We recommend using at least a 1/3 HP motor rated at 1150 RPM and equipped with a 1 1/2" pulley. This ratio will produce about 115 to 120 RPM at the flywheel. Other motors may be used, but they will need to be geared so that the RPM at the flywheel does not exceed 140 RPM.

The Family Grain Mill is unique in that it offers both a grain mill and a roller mill, as well as a choice of hand-powered or electric, or both. You can mix and match the components any way you want. Grain Mill with hand base or motorized base, Roller Mill with hand base or motorized base. Buy both on the hand base for about \$196 from Homestead Products website: <http://www.teleport.com/~dany/mill/index.htm>, phone in Oregon: 541-688-9263.

The Little Ark Grinder (about \$99) with stones and burred grinder. The burrs and stones are easily interchanged. All one has to do is screw out the thumb screw on the end, pull the stones off, put the burrs on, and screw in the thumb screw. I prefer the stones for grinding wheat because I like a finer flour. I did a test run the other day grinding a cup of wheat with the stones, and another cup of wheat using the burrs.

The burr ground flour did have a slightly gritty feel when I felt it between my fingers. The stone ground flour didn't - powder. It took 4 minutes 30 seconds to grind a cup of wheat with the stones and 4 minutes with the burrs. Both grinding operations were made turning the grinder at about 60 RPM. I personally use the burrs only when I'm grinding oily things, like peanuts for making peanut butter. But some people use them exclusively. Four minutes is a long time to grind a cup of wheat, I know. But it takes a lot of energy to grind wheat no matter what grinder you use. Some grinders brag that they can grind a cup of wheat in a minute. Maybe they can, but I know of one grinder that makes that claim but can't. For those that do, it probably grinds much coarser than the Little Ark, not requiring as much energy to get that fine grind. The Little Ark can also grind this quickly if you set it for a coarse grind. Anyway you look at it, making a four loaf batch of bread is going to take some work with any hand grinder.

KITCHEN MIXERS

BOSCH Universal Kitchen System (about \$465)

K-TEC "Champ" Delux model with all attachments (\$435) Phone: 801-785-3600 website www.k-tecusa.com. The Champ Mixer is the most versatile multi-function home food preparation machine available today. The Champ combines the features of a strong 1400 watt, 1.8 peak horsepower motor with a sophisticated, keypad-controlled computer "Bread Brain." The Champ computer assists the cook by measuring the resistance of the developing gluten in the bread and turns off the machine once it has developed perfectly. The Champ is also the strongest blender on the market. Our blender jar is made of GE Lexan plastic, the same material used in bullet-proof glass. The most popular attachment is the pasta maker/meat grinder combination.

PRESSURE CANNERS

All American is now producing the model 941 (41 quart) pressure canner. Smithfield Implement in Smithfield, UT has them in stock. If you need another source on home canning see <http://www.home-canning.com>. Home Canning and Supply PO Box 1158, Ramona CA 92065 Tel: 619-788-0520.

PEELER

Apple, Potato Peeler (about \$30, plus \$12 for potato attachments) Emergency Essentials.

SMALL CONVENTIONAL REFRIGERATOR (most energy-efficient)

Magic Chef ct-1511AE (15 cubic ft) uses 1.2 kw/day \$37/year.

LARGE CONVENTIONAL REFRIGERATOR (most energy-efficiency)

Kitchen Aid, Whirlpool, Kenmore 25 cu. ft. side-by-side use 1.75 kw/day or \$54/year.

ALTERNATE ENERGY REFRIGERATORS

SOLARFRIDGE: 19 cu. ft. (12 volt fridge) Better alternative to SunFrost but same high price. (\$2,700) Simpler Solar 3118 W. Tharpe St. Tallahassee, FL 32303, website: www.simplersolar.com or call 1-800-248-9786. Two models of fridges use .5 and .7 kw/h for the 6 and 12 cu ft models.

PLANET DC 11.6 cu.ft. 12/24VDC Refrigerator/Freezer, Jade Mountain, about \$1,275.

KOOLATRON - small non compressor technology - about 2 cu. ft., 4 amp 12Vdc icebox. About \$165, Jade Mountain.

Kool Mate 40 by Igloo. Another thermoelectric cooler like the Koolatron - sits upright or on its side so as to operate like a small fridge.

POLARTECH 19 cu. ft. (12 volt fridge): Another alternative to Sun Frost - still expensive, Jade Mountain.

PROPANE OR KEROSENE REFRIGERATORS

EXPLORER Propane Refrigerators: Uses only 1.2 gallons of propane per week and is a large 14 cu. ft. Website: www.nwes.com. Northwest Energy Systems, 6791 South Main, Suite C, Bonners Ferry, ID 83805 Orders: 800 718-8816 Tech Support & Design Questions: 208-267-6409

NORCOLD: 2 way and 3-way 7.5 cu. ft. Propane fridge model 1082, about \$990 from Jade Mountain.

DOMETIC 7.5 cu. ft. propane fridge (same as Servel brand from Sweden) - about \$1,200. Can also buy these with 120volt backup power, or in natural gas or kerosene. Jade Mountain.

FOOD DEHYDRATORS

Magic Aire II On-Line Health Products 387 Yellowstone Ave., Pocatello, Idaho 83201 (800) 789-1577 or (208) 234-9352 <http://www.dhi.com/>.

Air Preserve II On-Line Health Products 387 Yellowstone Ave., Pocatello, Idaho 83201 (800) 789-1577 or (208) 234-9352.

Harvest Maid (Available at many preparedness stores listed at the beginning.)

WATER DISTILLERS

Genesis 20-G3000 (about \$250). This is a portable model, counter-top. Optimal Health Concepts 355 N. Lantana Street, Suite 730, Camarillo, CA 93010-9030. 24 hour Orders: 888-390-4676 <http://intohealth.com/> This company sells a lot of excellent health products.

PORTABLE WATER FILTERS

PUREFLOW 2000 will remove bacteria, giardia, cryptosporidium, chlorine, chlorine byproducts, volatile organic compounds (VOCs), trihalomethanes, pesticides, herbicides, tastes, odors, and more. PureFlow 2000 purification starts with our highly efficient clean able ceramic microfilter which provides genuine sub-micron filtration. After all signs of bacteria and ultrafine sediment are removed, the PureFlow 2000 passes the water through a highly dense solid block of extruded activated carbon. Chlorine removal for 20,000 gallons (76,000 liters) of water at 1ppm chlorine. The PureFlow2000 "Plus" is the same System with a 3rd Filter for heavy debris URL: Supplies4Y2K.com Tel: (406) 375-9282 Mail: 610 N. 1st Street, Suite #5-150, Hamilton, MT 59840 USA.

BREAD MAKERS

Zojirushi V-20: order online from Costco for the best price about \$145 www.costco.com. See a product review of all the breadmakers at <http://www.sonic.net/webpub/bread-machine/breadmachine.html>

BREAD MIXERS

BOSCH mixer: This unit is the Cadillac of all combination units. There is no higher quality unit around. The unit with all the attachments, including everything imaginable, will run you several hundred dollars. The other major competitor is the K-Tec which has some newer and more modern features

K-Tec mixer: The K-Tec has the most powerful motor on the market and the strongest blender system. It also has a highly sensitive computerized sensor that shuts down the bread kneading process when the gluten resistance is just right. This, alone makes the K-Tec the technological leader. See K-Tec under **KITCHEN MIXERS** for contact info.

WATER DRIVEN FOOD DISPOSAL

Hydro-Maid is the first totally non-electric, water-powered food disposal released by Environmental Systems & Solutions Inc. in Utah. Touted as safer, cheaper, quieter, and more environmentally friendly than traditional garbage disposals, the system cannot damage silverware accidentally dropped in the unit while it's running because it will drop into another compartment. It can also handle any food, including those homeowners try to avoid with most traditional garbage disposals. The Hydro-Maid is priced at about \$299.

HIGH EFFICIENCY WASHING MACHINES

Staber 2300 washing machine uses 1 oz., of soap, 21 gallons of water (saves 25 gallons/load), less than 200 watts per load. Spins faster, most of the water is removed. It is a toploader and the clothes go through a door in the rotating drum - not as convenient to load or unload because of the small opening. About \$1,100 from Abraham Solar 1-800-222-7242.

FRONT LOADING WASHERS - CONVENTIONAL

ASKO 11505 The best of the current models Price: \$1,100 USA is an export model of the Swedish unit. A small, European sized unit with very high spin speeds. Also very high priced (\$1,500-\$2,500 per washer/dryer pair). 1161 Executive Dr. West, Richardson, Texas 75081.

MAYTAG Neptune Mod #MAH3000A. The matching Neptune dryer model MD3000A. Model number for Neptune Super Stack washer/dryer combo is MUE for electric dryer, and MUG for gas. Neptune washer uses 22 gallons of water per cycle instead of the old average amount of 38 gallons per cycle. Spin speed is 800 rpms on the old and 850 on the new. Because of the larger tub size on the Maytag Neptune, less rpms are required to extract the same amount of water as other brands. Use HE (high efficiency detergents) about \$1,100.

FRIGIDAIRE (also Gibson) Front Loading Washer FT449GFS - spins up to 850 rpm dryer FSE748GF (matching front load). Low Price: \$800 (best buy) also is a true under-counter model. Floor models can be stacked for convenience and without buying any extra cabinet.

MANUAL WRINGER WASHERS

The James Hand Washer is the washer of choice among those who wash by hand as a way of life. Its unique lever action makes agitating the clothes so easy a child can do it. It has a stainless steel tub and a wringer so efficient that it gets out twice as much moisture as spin drying. Very well-made and durable. Wringer can be bought separately for \$130.00 The company that makes these will sell directly to you. Contact S & H Metal Products Inc., 122 Redman Dr, Topeka, IN (219) 593-2565. Or you can buy through Lehman's catalog, or for low prices, the Home-Health Resource, HCR 67, Box 65, Mountain View, MO 65548 Tel: 417-934-5454. URL:www.homehealthresources.net. Price: \$330 Shipping \$20-30 depending on location.

MANUAL CLOTHES WRINGER

Buy a Chamois [chammy] wringer at auto supply stores for about \$160 [Champ Catalogue item #J9-213]and mount on a 30 gal barrel. This is too high a price in my opinion. I would get the James washer wringer, instead. You can buy it directly from several other small outfits that carry them. Call the manufacturer, Lake City Industries at (814) 774-9616 to get a list of the nearest local source to you. It is called the #76-3 Hand Wringer.

PORTABLE COOK STOVES - KEROSENE

ALADDIN stoves carry the most complete line of kerosene heaters and stoves.

The ALPACA is great if you need something stronger and simpler than a backpacking stove. It's very sturdy and will take as large a pot as you care to put on it. Extremely simple, reliable design, with a minimum of moving parts to wear out. Fuel tank holds 0.9 gallons and has a fuel level gauge. Runs for 16 hours on a filling. Output 8,500 BTU; weight 13 lbs; size about 13" high x 13" diameter. There are many foreign models as well, since Europe and South America use kerosene extensively. PRIMUS is perhaps the largest foreign model.

WATERLESS COOKWARE

VOLLRATH: The heaviest and the best. The Vollrath Company, L.L.C., Tel: 1-800-624-2051, Fax: (920) 459-6570 website www.vollrathco.com.

LONG LASTING 130V LIGHT BULBS

FEIT ELECTRIC LA, CA lasts 14,000 hours and costs only a little more than standard bulbs - best buy on the market from Home Base and other stores.

COMPACT FLOURESCENTS

GE brand. They will run better off an inverter than other brands.

SUNPIPES

1,500 watts of free, fresh light as easy to install as stovepipe. Hollow, super-reflective pipe runs from your roof down to a translucent ceiling fixture that spreads the light down. Natural, full-spectrum light without glare, heat, or uncomfortable hot spots. Less expensive and easier to install than a skylight. Doesn't build up unwanted summer heat, create condensation, sun-fading problems, and won't leak. About \$400 from Jade Mountain.

LED 12V LIGHTS

White LED Flashlite Lasts over 100 hours on 3 AA batteries - a must have item. Best buy at \$25 from Abraham Solar at 1-800-222-7242.

18 LED Surface Mounting Light "Super Nova" available in 12,24, 36, 48 volts. A best buy at \$80 from Abraham Solar at 1-800-222-7242.

12v Light Bulbs Price depends upon quantity - call Abraham Solar or RV suppliers.

KEROSENE LAMP AND PROPANE LANTERNS

Rapid Kerosene Pressure Lamp uses pressurized fuel and a mantle to generate 500 lumens (300 watt light bulb). Burns 10 hours from one-third gallon kerosene (one filling). Jade Mountain - about \$50.

Petromax Multi-Fuel Lantern \$120 from Homestead Supply. This German beauty is the cadillac of lanterns. Burns all liquid fuels, nickel finish, very classy. Puts out tremendous light. Call Homestead Supply at 541-688-9263 in Oregon. www.petromax.com (be patient, it is a new website) or they can be reached at 727-856-9245.

Dietz Wick-Oil Lamp The best of the old fashioned wick/oil lamps - beautiful and inexpensive. Lanterns Online, 5330 Ravenna Rd., Newton Falls, Ohio 44444
URL: <http://pages.prodigy.net/timcallen/lantern/order>.

Humphrey Propane Lamps The oldest and best company - about \$53 each, Jade Mountain.

FULL SPECTRUM COMPACT FLUORESCENT

Sun-A-Lite Compact fluorescent replace screw-in bulbs with total spectrum, radiation-shielded fixtures. About \$35 from Jade Mountain.

Excella Full spectrum fluorescents 20 watts to 40 watt tubes - about \$10 each, from Jade Mountain. They also have 12 V GROW LITES.

FEATHER QUILTS, BEDS

The Company Store: 500 Company Store Rd, LaCrosse WI 54601, Tel: 1-800-356-9367.

NON COMPUTERIZED SEWING MACHINES

BERNINA 1008, (around \$800).

VIKING "SEW EASY" 330 (around \$700).

CORDLESS TELEPHONES

CASIO 820 (About \$90).

RESIDENTIAL ELEVATORS

Lift-Avator 435 Park Ave, Lockport, NY 14094 Tel: (716) 434-1300. URL: <http://www.stair-ease.com/>

Tri-State Elevators at <http://www.tri-state-lift.com/> shows 4 or 5 of the most common residential elevators. Tri State Lift 1414 South Oak Street Owatonna, MN 55060 Toll Free Call: 1-800-626-6017.

NUCLEAR PROTECTION EQUIPMENT RADIATION METER

Victoreen 717 surplus survey meters. Range 0-500 rads, comes with detachable ion chamber so you don't have to buy a separate probe to take measurements outside the shelter. Uses 1 "D-Cell" battery. Simple, low tech, reliable. These are not in production, unused in new condition. Have not been calibrated since production. Calibration will usually drift 10-20% at the most, which is not critical for the high dose measurements you would make in a nuclear war. \$150 from J&A Specialty 1-801-224-9139

CALIBRATION NOTE: Meters can be recalibrated if necessary by sending them to Jordan Nuclear, 3244 Arroyo Seco Ave, L.A. CA 90065. Call for rates: 1-(323) 222-8143. Mgr: Ed Manughian

Dosimeter Corporation model 3510. Range 0-3000 rads. Cost \$600, Probe is extra (about \$300). Contact Tel: 1-800-322-8258.

KFM kit meter (\$12) order from Emergency Essentials, Orem Utah. (1-800-999-1863).

NUCLEAR BIOLOGICAL, CHEMICAL (NBC) FILTER SYSTEM

Model LUWA 180, about \$6,000 - super expensive. US Rep. for the Swiss Luwa Corporation is Sharon Packer, Utah Shelter Systems, PO Box 638, Heber, Ut 84032 or on the web: www.netoriginal.com/uss

ALTERNATE AND CHEAPER NBC FILTERS (HEPA SPECS)

Order all 3 Replacement filters for a Honeywell "Enviracaire" model #63200 filter unit:

1. Replacement HEPA filter (down to 3 microns) (#28600) about \$80
2. Replacement CPZ filter (#36200) about \$80
3. Replacement charcoal Pre-filters (pkg of 2) - (#34002) \$20

Order from J&A Specialty 1-801-224-9139

Sears also carries replacement HEPA filters for various Honeywell models - most of which are suitable for our purposes. I did not find any of the CPZ filters for chemical filtration, however.

WW GRAINGER carries the HEPA and the CPZ filter, but not the charcoal pre-filters. Here are the Grainger stock numbers: HEPA FILTER: 3GD14 (\$79), CPZ FILTER: 3GD18 (\$79).

12 VOLT FANS

ITT JABSCO, model 35115-0020

WW GRAINGER stock # 4C814 (\$46) Note, these are plastic blowers, high RPM 4200, hence noisy. These are not meant to be run on continuous duty (for continuous duty fan, order stock #2C646a 12 volt, 176 CFM about \$44). 110volt fan (141 cfm) for ventilation under normal power, buy unit number 2C916.

Round AUTO AIR FILTERS to place over shelter air inlets, about \$4 each. available at auto supply stores.

EMP PROTECTION

EMP PROTECTORS

Zero Surge: The newest instantaneous clamping technology. Use for all your valuable plug in products like computers. ZeroSurge 944 State Route 12, Frenchtown, NJ 08825 Tel: 800-996-6696 Email: sales@zerosurge.com URL: www.zerosurge.com.

Alpha Delta Communications P.O. Box 620, Manchester, KY 40962 Tel. 606-598-2029 Products: Coax lightning arrestors, coax switches with surge protectors.

Ameritron, Louisville Road Starkville, MS 39759 Tel. 601-323-8211 Products: Remote coax switches, inrush AC current protector.

ICE: Industrial Communication Engineers, Ltd. P.O. Box 18495, Indianapolis, IN 46218-0495 Tel. 317-545-5412 Products: Coax lightning arrestors.

Polyphaser Corp. P.O. Box 9000, Minden, NV 89423-9000 Tel. 702-782-2511 Products: top of the line military grade EMP protection equipment. Prime source of all US government equipment.

GROUNDING STRAPS, ETC

Certified Quality (The WIREMAN) 261 Pittman Rd., Landrum, SC 29356 Tel. 800-727-9473 (orders), 803-895-4195 (Tech line) Products: The Wireman stocks copper wire up to #4 AWG, 2-inch flat copper strap, 8-foot copper-clad ground rod and 1 x 1/4 inch bus bar.

Rohn Towers P.O. Box 2000, Peoria, IL 61656 Tel. 309-697-5612 Products: Radio towers mostly, but also copper strap and tower grounding products.

FALLOUT SHELTERS

PREFAB CONCRETE TANKS (use for burial underground)

Oldcastle Precast (Custom precast waterproof concrete tanks - Address: 2820 A Street, SE, Auburn, WA 98071-0608 Tel: (253) 833-2777 Fax: (253) 939-9126 Website: www.oldcastle-precast.com Toll free: (888) 232-6274. They have local manufacturers all over the USA.

UNDERGROUND STEEL TANK-TYPE FALLOUT SHELTER (using 8' round steel culvert pipe--about \$10,000 to build)

Utah Shelter Systems P.O. Box 638,-Heber, Ut 84032 (Sharon Packer (801) 942-5638).

Bear Den Reinforced Plastic Shelter Best buy of the pre-fab buried shelters. Length: 114" Widest Point: 93" Main body height: 100" Riser projects approx. 38" Weight: approx. 1,000 lbs. Quadel Industries, Inc. 1-800-289-7659.

Storm Chaser Shelters 1200 Lawson Road, Fort Worth, TX 76131 Tel: (817) 847-9000.

Do-It-Yourself Plans for tank type shelters from Art Robinson, Oregon Institute of Science and Medicine, 2251 Dick George Road, Cave Junction, Oregon 97523 Tel: (541) 592-4142.

BASEMENT FALLOUT, SECURITY SHELTERS

see "The Secure Home" by Joel Skousen URL: www.joelskousen.com Order from Swift: 800-292-2831.

CONCRETE BLOCK SHELTERS built into existing homes - see "How To Implement A High Security Shelter in the Home" by Skousen, www.joelskousen.com or Swift: 800-292-2831.

OXYGEN MONITOR

GT-96, #57-1112, \$260 call 1-800-528-7405. It has an audible signal which may prove annoying and could be converted to LEDs.

CO2 MONITOR

Tells you if carbon dioxide from occupant breathing activity is getting too high. Elevated CO2 will cause problems before you run out of oxygen.

PRIVA, used for greenhouses: from Domestic Growers Supply, Cave Junction, Ore. Tel: (541) 592-3615.

DRY FLUSH PORTABLE TOILET

Porta-John Systems, Inc. 50633 Ryan Road, Utica, Michigan 48317 Tel: 1-888-PORTA-JOHN (1-888-767-8256). This portable, free-standing toilet doesn't use any water, but dry suction everything into a bottom compartment lined with a plastic garbage bag. After 30 flushes, simply remove bag.

ELECTROSTATIC CARPET SWEEPER

FULLER BRUSH sales Item # 101 - Price \$49.99. Check with your local Fuller Brush salesperson. Many have internet sites such as <http://www.hfbd.com/>

PLUMBING SYSTEMS

COMPOSTING TOILETS

BIOLET mini-composting toilet. Finally a composter about the size of a regular toilet! www.biolet.com
Tel: 1-800-5biolet (US) 800-6biolet (Canada)

CLIVUS MULTRUM II for large unified system, using special toilets. Will compost continuous use for multiple people and also kitchen waste. Large size, must be sited in a basement area.

SUN-MAR CENTREX PLUS moderately small sized for placement in bathroom. Works on AC or DC power, automatic controls available. From \$1,200-1,800 depending on options. Jade Mountain.

GREYWATER SYSTEM

EARTHSTAR Greywater Systems Automatic operation, sand filter with backwash cleaning, about \$1,000 from Jade Mountain.

GREYWATER FILTER

Filter and tank, with DC or AC pump - about \$450. Jade Mountain.

BIODEGRADABLE LAUNDRY DETERGENT - must use with grey water so as not to damage plants. Jade Mountain carries it.

SANITATION EQUIPMENT

Chemical Toilets: (\$20-50) available at camping and RV stores.

Marine Toilets: --My preferred manual toilet recommendation for shelters. These toilets have a manual pump that will pump waste up a 1-1/2" pipe as high as 6' allowing use in basement shelter systems where one must connect to existing plumbing drains at ceiling height. (about \$300) JABSCO brand, call 1-714-545-8251 to find distributor nearest you. Available at yacht and marine supply stores - order model #29120-2000 for the larger, elongated bowl.

Dry Flush Toilet: Porta-John® Systems, Inc. 50633 Ryan Road, Utica, Michigan 48317
Tel: 1-888-PORTA-JOHN (1-888-767-8256).

POTASSIUM IODATE TABLETS Take after any nuclear incident to avoid thyroid contamination by radiative iodine uptake. \$16/bottle plus s/h. J&A Specialty Tel: 801-224-9139.

HYDRAULIC RAMS

Columbia Hydraulic Ram contact: Skookum Co. Inc. 8524 N. Crawford St. Portland, OR 97203.

Pacific Hydro Corp. 400 Forbes Blvd. San Francisco, CA 94080

Rife Hydraulic Engine Mfg. Co. 316 W. Poplar St., P.O. Box 790, Norristown, PA 19401
Tel: (717) 740-1100 Fax: (717) 740-1101 Email: rife@epix.net.

Highlifter Pumps and B & L Hydraulic Rams (cheaper and simpler) from Abraham Solar Equipment.

HIGH EFFICIENCY CONVENTIONAL WATER HEATERS

Vaughn Manufacturing Corporation, 26 Old Elm St., P.O. Box 5431, Salisbury, MA 01952-5431 Tel: (978) 462-6683 (R-18 Urethane insulated, hydrastone-sealed tanks for long life).

Rheem/Rudd -Marathon Non Metallic tank - should last a lifetime. Electric only. (available from all Rheem/Ruud dealers) R-20 urethane insulation. The Imperial Plus line of standard water heaters are 10 year warranty R-20 units) see URL: www.rheem.com.

WOOD WATER HEATERS

AquaHeater Lehman's also sells a stand-alone water heater (their "System Two" unit) which is an AquaHeater that heats hot water in only 12 minutes without electricity! It provides a continuous supply as long as the fire is maintained. After the fire goes out, the insulated tank keeps the 10 gallons of water hot for hours. It produces up to two gallons of water per minute.

LOW SURGE SUBMERSIBLE WELL PUMPS

Grundfos Variable Speed 3 inch submersible pump. Check www.us.grundfos.com.

12 OR 24 VOLT SOLAR CIRCULATION PUMPS

Grundfos: www.us.grundfos.com Available through most plumbing distributors.

POLYBUTYLENE PIPING AND MANIFOLDS

There is no better plumbing system for the do-it-yourself plumber than plastic pipe systems. You have two choices now. One is polybutylene. It is very flexible and freeze resistant since it will expand rather than split or break. There has been a lot of bad press given to polybutylene due to the occurrence of leaks in the older systems (almost always at joints with plastic fittings that cracked under improper clamping). No findings of controlled studies have been published that show polybutylene to be inherently defective. I have used it for over 10 years without a leak. Homeowners should be aware that problems occurred at pipe joints only when the old style plastic fittings were used. Also, use of improper installation of clamps causes leaks. In addition, some homeowners report having discovered deteriorated underground piping upon digging it up in their yards. The new copper and brass fittings do not have any of these leakage problems. If a minor drip occurs, it is immediately noticeable after installation and can be remedied by reclamping with the special clamping tool. Most leaks, which are very rare, occur when the clamping tool is tilted or skewed during clamping. This pipe will soon be replaced by the following improved version:

POLYETHYLENE PIPE (PEX)

This is the newest type of plastic pipe that is on the market. It appears to be stronger and more chemical and heat-resistant than polybutylene. It also uses the new manifold type plumbing junction connections like polybutylene. It is a little more expensive, however. See URL www.vanguardpipe.com for details.

WATER TANKS

There are several types of plastic water tanks on the market - all of them preferable to steel in the small to medium sizes. The white tanks are POLYPROPYLENE, colored tanks are usually POLYETHYLENE, and black tanks are ABS plastic. FIBERGLASS tanks are used for the larger reinforced tanks and are not suitable for stored drinking water due to chemical outgassing. I will not list individual suppliers here because these are obtained locally in every rural farm community in the country, including the entire East Coast. Check the Yellow Pages for "tanks" or "water tanks."

Kolaps A Tank (bladder type collapsable tank, useful for hauling water in a pickup, and for temporary storage. It will even act as a giant solar water heater. Order from Domestic Growers Supply, Cave Junction, Ore. Tel: (541) 592-3615. The range in price from \$400 for 275 gallons to \$700 for 1,340 gallons.

RADIO EQUIPMENT

All of the following equipment is available from Ham Radio Outlet or AES - the two biggest mail order radio stores - contact info at beginning of section.

FAMILY BAND RADIO

No license required, 1-2 mile range, low powered - like a walkie talkie, only higher quality. Available at electronic and radio stores locally--these are the best buy alternatives in radio. Best deals at Costco

CB RADIO

40 Channel: Radio Shack (from \$50-75, NO LICENSE REQUIRED).

SHORT WAVE RECEIVERS Portable

Sony ICF-SW100s The ultimate in miniature-sized world band receiver (size of cassette) \$400.

Grundig Satellite 700 best sound of the high-end, full sized portables (\$400).

Sony ICF-SW7600G Best buy of the medium-sized, fully capable receivers (\$190).

Note: I do not recommend the Baygen (Freeway brand) wind-up radio, unless you must have the wind-up option. The radio receiver is not a high quality unit compared to those listed above. Even the sub-\$100 name brand SW radios are superior.

HF TRANSCEIVERS (transmit and receive; compact and portable} - MUST HAVE HAM LICENSE. The 4 major manufacturers, Yaesu, Icom, Kenwood, and Standard all put out extremely high quality products. Each have a similar range. If you aren't going to get deep into ham radio (which requires a lot of study and time), choose an HF transceiver that has the minimum features plus a built-in antenna tuner. These will cost between \$1,200-\$2,000. Don't go for the top of the line models as they are very complex and hard to remember how to use.

Kenwood TX-50S (\$1100) 12 volt Portable: can be mounted in a vehicle.

Kenwood TS-850S/AT Desktop model: built in antenna tuner (\$1,800).

UHF, VHF radios, portable base station, dual band, plus capable of acting as a repeater

Kenwood TM733 (2m/440mhz) \$620.

HANDHELD PORTABLE

(2m/440mhz) Kenwood TH-79A (\$460).

ANTENNAS

Car mount: Diamond NR-72BNMO (\$45), base station Diamond X-200A.

CB antennas, car mount. Radio Shack (about \$30).

MOBILE HF ant: Outbacker Perth (\$270). Vertical Home base ant: Cushcraft R7 (\$380).

Short Wave Antenna for your portable: SWL antenna (\$30), Ham Radio Outlet.

SCANNERS

Hand held, continuous coverage: AOR AR1000XLT (\$420).

Desk top: Bearcat 8500XLT (\$375) 500 channels, not continuous coverage of all frequencies.

Antenna for Scanners: Home base station: Diamond D130.

SECURITY EQUIPMENT

SPECIALTY METAL HATCH DOORS The biggest and best company to supply all types of specialty hatch doors (roof, floor, and wall hatches) is Bilco door - long known for their sloping basement/tornado shelter doors. URL: www.bilco.com The Bilco Company, P.O. Box 1203, New Haven, Connecticut 06505 Tel: 203-934-6363.

WINDOW WELL SECURITY

The Improvement Network (www.windowwell.com) markets a full range of lexan plastic window well covers for emergency escape and security against entry. Tel: 888/934-6776.

BULLET RESISTANT WINDOWS

Jarrett, Inc, Full range of custom bullet-proof windows made to order, set in traditional window frames. 1-800-533-5097.

PROTECTIVE FILM

Shattergard Unbreakable backing to standard glass - can be applied to existing windows. Makes windows bullet-proof to small caliber (.22) weapons and makes windows impenetrable to intruders. www.shattergard.com. You can also use this on car side and rear windows to keep thieves from breaking in, which is highly recommend.

BEST HIGH SECURITY CONVENTIONAL ENTRY DOOR SYSTEM

Secure Seal brand doors/side lights (Heavy gauge metal doors in decorative styles with high security metal jambs and window lites) by ABE Doors & Windows at (610) 398-2430 located at 6776 Hamilton Blvd. Allentown, PA.

STEEL UTILITY DOORS:

SteelCraft. This company makes the heaviest guage production doors available. You can get both doors and frames in 14 guage steel. A 12 guage door is bullet-resistant to some small arms but no longer available. To order the lock prep option, specify opt. 161. Contact: SteelCraft 9017 Blue Ash Road, Cincinnati, OH 45242 Tel: (513) 745-6400 or Toll Free: (800) 243-9780

VAULT DOORS

Liberty Safe Co. Springville, Utah Tel: (801) 489 8550. 1000 lbs, \$3500 +ship. They have local dealers around the country. You can order these through J&A Specialty (801) 224-9139 at a discount (less than \$3,000).

LIGHT WEIGHT VAULT DOOR for retrofit onto a closet or security room:

AMSEC Model VD8030 Door opening: 77-1/2" H x 26-1/2"W Weight: 550 lbs. American Security Products Co. 11925 Pacific Avenue Fontana, CA 92337 Tel: 1-800-421-6142.

BULLET-PROOF DOOR

Amweld series 1544, bullet resistant to Level 3 (high powered handguns) about \$1,200 including high security locks. Amweld Building Products, Inc., 1500 Amweld Drive Garrettsville, Ohio 44231 Email: info@amweld.com Tel: 1.330.527.4385.

Trussbilt level III (\$661) level IV \$2119. Pressure Resistant (150 psi) \$612 Trussbuilt New Brighton, MN (651) 633-6100.

BULLET-PROOF STEEL UTILITY DOOR

I am presently experimenting with converting a standard hollow, reinforced metal door into an inexpensive bullet proof door by replacing the insulation with a special packed gravel. Hopefully, this can be done by ordering a reinforced door without the insulation, removing the top plate, filling with pea gravel and replacing top plate.

ARMORED STEEL PLATE

Custom (\$400 for door sized 5/16" tempered steel - level 4 protection - 7.62 high velocity military rounds). Order from Heflin Steel Phoenix, Az Tel: 1-800-528-4021 or local 252-8061. Attach this plate to a SteelCraft Series B-14 door with pour-in-place F-14 steel frame (for 8" concrete). About \$400. With shipping and labor to put it together, this would cost about \$1,100-1,200. If you are near a large city in the East, call around to see if any steel distributors carried tempered steel or armored steel plate.

SECURITY CLOSET DOOR

Total Door by Openings 40 W Howard St. Pontiac, MI (248) 335-7380.

BULLET-PROOF PANELS

(Kevlar fiber building panels for protecting walls)

New Necessities Millibar Panels 5710 Pebblebrook Trail Gainesville, GA 30506 Tel: 770-844-9438 Website: www.millibar.com. Panels vary in thickness of bullet resistance from 1/4" (level 1) 7/16 (level II) 1-1/8 (level III), 1-7/16 (Level IV). Level II paneling is the minimum I recommend. Level two panels are about \$600/4x8 panel.

KEVLAR REINFORCING WEBBING FOR HOMES

Use to create an earthquake or tornado-proof room or closet in the home. Nail special kevlar webbing crosswise (X-pattern) around home or walls to make powerfully rigid shear walls. Also binds home down to foundation. Tape is 3" wide in 100 foot rolls and about the thickness of a nickel. --Very strong stuff.

New Necessities 5710 Pebblebrook Trail Gainesville, GA 30506 Tel: 770-844 URL: www.millibar.com.

BULLET-PROOF FABRICS, VESTS

BulletProofME.com Brand-name bullet proof vests and body armor accessories at discounted prices. URL: <http://www.BulletProofME.com>.

Bulldog Direct P.O. Box 8561 Cincinnati, Ohio 45208-8561 Tel: (513) 281-6700 Website:
<http://bulldogdirect.com>.

BULLETS:

Cole Distributing has some good mail order prices and some unique ammunition from a high quality manufacture in Mexico:

.22 LongRifle -standard velocity-Pistol Match-\$19.95/500 rnds

.22 LongRifle -subsonic hollow point- \$13.95/500 rnds

.22 High Velocity copper coated - \$11.95/500rnds

.22 -SSS "Sniper Sub-Sonic" 60 grain- \$24.95/500 rnds

there is a 3 brick minimum for free shipping and handling. You can "mix'n'match" to achieve 3 brick min. with this ammo or the other .22's already at the website. www.cole-distributing.com

SPOTTING SCOPES, TELESCOPES

For a great place to buy binoculars, spotting scopes, telescopes, and accessories, try Eagle Optics at www.eagleoptics.com or call 1-800-289-1132. A Bushnell spotting scope was \$49 less than the cost would have been from major mail order sporting goods companies. They carry most brands and models, and have helpful on-line buying guides. Address: 2120 W. Greenview Dr. #4, Middleton, WI 53562.

SOUND PROOFING FINGER FOAM (for Underground Shooting Ranges)

SONEX by Ilbruck Inc, 3800 Washington Ave North Minneapolis, Mn 55412. Tel (612) 521-3555.

GATE OPENERS

STANLEY full range of residential and commercial gates and opening types (available nationwide) call 1-800-STANLEY for distributor info.

SYNTEX - have battery-operated, solar panel-controlled openers. 1-800-998-9197

Elite Access Miracle-1 opener - 100/day and 600 lb gates. <http://www.eliteaccess.com/resopen.html>

Mighty-Mule Gate Openers: GTO Inc. 738 Capital Circle NW, Tallahassee, Fl. 32304 Tel: 1-800-543-4283.

ROLLING SECURITY SHUTTERS

Roll-A-Way offers rolling or accordian shutters in Aluminum, PVC, or clear Lexan. email: info@roll-away.com Rollaway National Headquarters 10601 Oak Street NE, St. Petersburg, FL 33716 Tel: (800) 683-3230 (888) ROLLAWAY.

Rolsafe URL: www.rolsafe.com 5845 Corporation Circle Fort Myers, FL, 33905 Tel: (941) 694-5400 Fax: (941) 694-8000 Toll Free: 1 800 833-5486

Rolladen: Top of the line, most expensive system, aluminum, PVC rolling shutters. Rolladen also produces working colonial security shutters. Tel: (800) 748-8837.

SECURITY SYSTEMS

I will list here systems that are capable of monitoring the home and all systems from your shelter or from a remote telephone.

ITI's UltraGard Wireless/Hardwire System for security and home automation. ITI Corporate Headquarters 2266 Second Street North North St. Paul, MN 55109 Tel: 800-777-2624 URL: www.securitypro.com.

I'm convinced that ITI is the most advanced security company in the US today. Here are the superb wireless features for remodeling applications:

Digitized voice feedback and status updates assure proper system operation

Light control and line carrier home automation provide added security and convenience

Energy management and HVAC control for money-saving efficiency

Telephone control makes any touchtone phone a system touchpad

Sophisticated two-way voice prevents false alarms

Keychain touchpads for easy arming, disarming, and light control

ITI narrow band crystal-controlled transmitters and receivers increase range and power

ITI spatial diversity antennas maximize receiver strength

Patented ITI Learn Mode sensor technology speeds error-free installation

Integrated ITI electronics require fewer board/module add-ons

ITI offers the longest sensor battery life in the industry - 5 to 8 years on most models and 20 years on the special Long-Life Door/Window Sensor!

ITI has the most extensive line of wireless security, fire, environmental, and emergency response sensors on the market

Security Pro 5000 (Another ITI company for wireless or hardwired connections) URL: www.securitypro.com.

The Security Pro 5000 is a versatile security and home automation system that does it all: intrusion detection, fire/smoke alarm, environmental monitoring (carbon monoxide, freeze detection), energy management, light control, and wireless operation. The system talks to you, providing voice verification that the system is set the way you want it, and during an alarm the system's voice alerts you to the type and location of the alarm. On or off-site telephone control with voice feedback makes any touchtone phone a Pro 5000 touchpad.

APEX (hardwired) Advantage has the latest in voice prompting technology (voice tells you where intrusion is). It also has numerous control features included which allow you to control lights and equipment automatically. See the Destiny 6100 model at URL www.ademco.com/apex.

ADT Pro Custom: (hardwired) ADT is the largest national chain of alarm systems. The ProCustom system has most of the features that the Apex system has) 1-800-238-3009 or www.adt.com.

RETARDANT SPRAY

Sprays for shingles, wood siding, cardboard - almost everything. Water-based, non-toxic, safe.

FSI email: fsi@fireprevention.com P.O. Box 1630, Port Angeles, WA 98362 Tel: (800)227-2694 URL: www.fireprevention.com.

Flame Seal Products Inc. 4025 Willowbend Blvd. #310, Houston, TX 77025 Tel: 713 668 4291 URL: www.flameseal.com.

SECURITY COMPONENTS, MAIL ORDER

Mountain West Supply Co. 9405 E. Doubletree Ranch Road, #B234, Scottsdale, AZ 85258 local Tel: 602-971-1200 Toll Free: 1-800-528-6169.

INTERCOM (with listen in remote capability)

AiPHONE brand, with 2 camera video monitor capability: Master unit and MF-DL cameras (www.securitybase.com).

NUTONE get their top of the line unit, with remote listen in, plus up to 10 cameras.

VEHICLE ALARM SYSTEM Add-on type

Mobile Alert Vehicle Security System: Radio Shack.

Optima II (monitors vehicle electric system for any turn on, or motion - \$60) from Personal Safety: <http://www.personalsafety.com/caralarms.htm>.

HIDDEN VIDEO CAMERAS

Security Base Phone: 1-800-616-0213 URL: www.securitybase.com (has the widest selection of covert video cameras).

VIDEO MOTION DETECTION

Quark manufactures a complete line of Video Motion Detectors, from lower resolution (generally indoor use) 8, 12, and 18 channel devices (the Q-line) to enhanced 4 & 8-channel unit (the ESP-line) to the NET-line of 4 & 8 channel high resolution devices. URL: www.quarkdigital.com 1 800 327 5616.

FENCE SENSORS

SouthWest Microwave <http://www.southwestmicrowave.com>, Tempe, Arizona. INTREPID system - uses coax cable and sensor to detect any vibration (3 yards accuracy) on fence from climbing. Their MICRONET system is even more accurate and displays to a computer screen with map of your property layout.

SEISMIC GROUND DETECTORS

JRH Enterprises P.O. Box 3986, St. Augustine, FL 32085 Tel: 904-797-9462 email: jrh@aug.com. I've had reports that these are no longer available. Anyone who finds any of these Vietnam-era devices, let me know. They are invaluable for area detection around a home.

SAFES

LIBERTY SAFE CO Builds gun safes and vault doors for home installation. Springville, Utah (801) 489 8550 (also builds National and Remington brand safes).

FLOOR SAFES

Hayman Safes (Website: www.haymansafe.com)

Adesco Floor Safes (Website www.adesco.com)

PEPPER SPRAY SHOTGUN SHELLS

Shomer Tec sells them. 360-733-6214.

TRIP WIRE TEAR GAS DISPENSER

The Espionage Store (802) 864-0951 <http://www.espionage-store.com/covert.html>.

SURVEILLANCE AND ANTI-SURVEILLANCE EQUIPMENT: Check out the full range of high-tech equipment available for surveillance and for counter-surveillance work. <http://www.electromax.com>.

Electromax International Inc. 11140 Westheimer, #276, Houston, Texas 77042 Tel: (281) 531-7437.

DRIVEWAY MONITORS

DWA-3 Suitable for burying beside driveway - so you won't have to dig up asphalt or concrete drive. (\$200) URL: www.drivewayalarms.com.

GARAGE DOOR OPENER ENCRYPTION

These systems rotate the codes on your door openers so they cannot be reused by a burglar who uses a special electronic eavesdropper to record your code. All new garage door openers come with this system built-in. Code Encrypter Plus, or Code Encrypter II, by RCI Automation, (619) 484-6307 URL: <http://ourworld.compuserve.com/homepages/rciautomation/p4.htm>.

STRESS FLOOR DETECTORS

Pressure sensors for use under flooring or roofs or under decks of boats for marine security.

PULSORS (8000 series) by Sure Action, Inc URL: www.sureaction.com.

GPS VEHICLE LOCATORS

To protect against auto theft or carjacking and kidnapping in your own vehicle. Small transmitter is hidden in vehicle which allows a GPS signal to alert a North American tracking company of the vehicle location.

Aertrax Vehicle Locator Address: AerComTec International, 1359 Silver Bluff Rd., Suite G-5, Aiken, South Carolina 29803 Tel: (803) 649-2900.

PEPPER SPRAY Foam with UV dye

Personal Safety, inc URL www.personalsafety.com.

ROOM FOGGER

Smoke Cloak fogs the room in seconds with a dense, non-toxic glycerin-based fog that dissipates with no residue. This is an excellent passive defense against mobs or vandals entering the home. Smokecloak Ltd., 10 Cochran Close, Crownhill, Milton Keynes, MK8 0AJ, ENGLAND Phone : 44 (0) 1908 567007 URL www.smokecloak.com Email: sales@smokecloak.com.

HIGH SECURITY DEAD BOLTS

Medeco: Has special pins and key that rotates the lock tumbler pins to prevent picking
URL: www.medeco.com (Available at Locksmiths everywhere).

Assa 6000 pickproof, double-keyed, drill resistant deadbolt (at locksmiths nationwide).

ELECTRIC DOOR STRIKES

Von Duprin Company, STRIKE FORCE ELECTRIC LATCHES
<http://www.vonduprin.com/ElectricSecurityProducts.htm>.

BRONZE PIVOT BEARINGS

For concealed pivoting cabinet (about \$2 for a set of two). All major cities have bearing specialty shops. Check the phone book. Ask for oil-impregnated brass or bronze bushings.

ARMORED CAR CONVERSIONS

Alpine Armoring Inc. 503 Carlisle Drive, Herndon, Virginia 20170 Tel: 703-471-0002 or 1-800-992-7667
Email: armor@alpineco.com.

Anaheim Armor Armored Vehicle Division, 2305 Bennington, Houston, Texas 77093 Tel: 800-594-1202,
Ext. 244 Email: security@anaheim-armor.com.

Bulldog Direct: Armored Vehicle Kits. Armored vehicle kits provide N.I.J. level IIIA hand gun protection from: 9 mm, .357 mag., .44 mag. Each armor kit comes with installation instructions. Bulldog Direct, P.O. Box 8561, Cincinnati, Ohio, U.S.A., 45208-8561 Tel: (513) -281-6700
URL: www.bulldogdirect.com.

PRIVATE ENCRYPTION SOFTWARE FOR COMPUTERS

Pretty Good Privacy (PGP) Learn all about it from URL: www.pgp.com.

HEARING AMPLIFICATION MUFFS

WOLF EARS: These specialty ear muffs will not only amplify small sounds, but they will attenuate loud sounds so that everything comes within your hearing comfort range. These are a must for combat shooting when you want ear protection but not so much as to keep you from detecting intrusions. These are very high tech. \$185 from Police Bookshelf, PO Box 122, Concord, NH. 03302-0122.

SOLAR EQUIPMENT

PHOTOVOLTAIC SOLAR PANELS

Siemens or Solec or BP 75 watt, panels. Approx \$400 per panel, from Abraham Solar 1-800-222-7242.

POLE MOUNTED SUN TRACKING EQUIPMENT (OPTIONAL)

Wattsun Sun Tracker (for a pole-mounted, tilting rack for solar panels to track sun-\$750) Abraham Solar 800-222-7242.

Zomeworks pole mount trackers, P.O. Box, Albuquerque, NM 25805, Telephone: (505) 242-5354 also from Abraham Solar 800-222-7242.

ROOF MOUNTED PANEL RACKS (rotating racks for roof mounting)

Zomeworks Albuquerque NM P.O. Box 25805, Tel: (505) 242-5354 or Abraham Solar.

A. For slanted roof mount: Order 2 drive axles \$625 each, and one slave axle \$275.

B. For Pole mount, 12 panels. Order 8612 unit - rack only, not the sun tracker.

Direct Power Fixed rack for direct roof mount: (2) six panel racks (\$250) from Abraham Solar.

COMBINATION CONTROLLER AND INVERTER

The Boss by Abraham Solar Equipment. This unit has all the equipment (controllers, disconnects, and inverter) pre-wired and mounted. All you do is connect solar panels and batteries. Mick can even provide the wire for your connections. Several sizes available. The complete unit costs less than what you can buy the individual components for individually. Basic unit is about \$1,000. Abraham Solar at 1-800-222-7242.

JUMBO SKID MOUNTED SELF-CONTAINED POWER SYSTEM

Electricity to Go by Abraham Solar. Self-contained powerplant, solar panels, inverters, and batteries all interconnected in one unit. Various sizes available. Check with Mick Abraham for details. For you who don't want any installation hassles, this is great.

SOLAR CHARGE CONTROLLERS

When not using the more expensive TRACE power center option, try the following alternatives from Abraham Solar 800-222-7242.

A. Sun Selector NDR-30 CD-EMP(30 amp capacity with power divert). There are other models available depending on system size.

B. Sun Selector M-16 (16 amp capacity with no automatic power diversion) for small systems.

SOLAR WATER PUMPS from Abraham Solar

SolarJack SCS Submersible Centrifugal Pumps - expensive submersibles down to 800 feet deep, performance comparable to small conventional pumps.

Powerlifter 1000

Shurflow or Flowjet pumps for lower cost pumps (between \$100-200).

Slowpumps are medium-priced pumps (\$500) that pump high vertical distances with low power, and low, steady output. Good for domestic water.

Dankoff Solar Surface Pumps - non-submersible centrifugal pumps for irrigation, using a small length of suction hose to draw from a creek or pond.

Highlifter Ram type pump. Use where you have no power source other than a stream. Will pump water between 400 and 1,000 high, depending on model. Volume is low, but steady. Very reliable.

SOLAR DESALINATORS

AGUA DEL SOL Agua Del Sol, PO Box 1114, Pima, AZ 85543 Tel: (520) 485-9211
(www.mrsolar.com) Prices: \$650-\$850 output 1-3 gallons per day (panels 4, 6, or 8 ft long x 36" wide).

PUR (Recovery Engineering) Survivor 35 (manual).2115 (smaller liferaft model is \$800), PowerSurvivor 40E. \$2,947, Recovery Engineering, Inc. 2229 Edgewood Ave. S., Minneapolis, MN 55426 Tel: 800-845-7873 local: 612-541-1313.

Sea Recovery Crystal Sea 12v or 24v or 110v models (\$4,000-6,000) P.O. Box 2560 Gardena, California 90247-0560 Tel: 1-310-637-3400 Email:searecovery@searecovery.com Website: www.searecovery.com.

SOLAR WATER HEATERS

Progressivtube: PO Box 3887, Sarasota, Fl 34230 Tel: (941) 953-2177 or Abraham Solar Equipment.

Solahart USA 939 South, 48th Street #207, Tempe, AZ 85281 Tel: 602-967-6785, 800-233-7652.

Solar Works, Inc. 64 Main Street, Montpelier, VT 05602 Tel: 802-223-7804 or 800-339-7804 (VT).

SunQuest, Inc. 1555 Rankin Avenue, Newton, NC 28658 Tel: 828-465-6805.

EVACUATED TUBE COLLECTORS (The best, and most high-tech)

Sunfamily Vacuum Collectors: Toll Free Contact: 1-800-822-7652 manufactured by SUN Utility Network Inc., 626 Wilshire Boulevard, Suite 711, Los Angeles, CA 90017 Tel: 213-623-9797.

Thermomax Evacuated Tube Collectors: 5560 Sterrett Place, Suite 115, Columbia, MD 21044 Tel: (410) 997-0778 URL: www.thermomax.com. This company has wide experience in joining a solar water heating system with a wood heating backup system into a hydronic floor-heated home.

SOLAR HOT WATER EXTERNAL HEAT EXCHANGERS

For use with solar hot water heaters that have anti-freeze protection.

DTL Series External Heat Exchangers (Thermosiphon type) from Solar Works, Inc., 64 Main Street, Montpelier, VT 05602 Tel: (802) 223-7804.

SOLAR WATER PURIFIER

Sol*Saver Solar Water Pasteurizer Safe Water Systems 2800 Woodlawn Drive, Suite 131, Honolulu, Hawaii 96822 Tel: 808-539-3937 website: www.safewatersystems.com (they also have a wood burning water purifier).

SUN POWERED COOLING

SOLAREX "Solar Chill" Solar Powered Evaporative Coolers from \$500-\$900, Abraham Solar or SunAmp Power Co. 1-800-677-6527.

SOLARIUM, ADD-ON GREENHOUSES

Durango Solariums, Durango Co, (970) 385-4561. There are similar custom solarium builders in every major city.

SOLAR GREENHOUSE VENT OPENERS

Thermofor, about \$55 from Jade Mountain.

Bayless Mk-7 or XL from A Gardener's Resource, P. O. Box 85072, Tucson, Arizona 85754 Tel: (520) 792-8023 URL: www.greenhousesupplies.com.

SOLAR FOUNDATION VENT OPENERS

SolarTek, \$19 each from Jade Mountain. Inexpensive device that prevents frozen pipes, termites, excess moisture, wood decay, molds, mildews, and fungus. It will also keep your home warmer in the winter and cooler in the summer. A bi-metal stainless steel coil automatically opens the vent at 72° and closes at 38°.

12 VOLT SOLAR CELL VENT PIPE FAN : About \$53 from Jade /Mountain - good for venting a small battery room.

12 VOLT CEILING FAN: about \$170 from Jade Mountain.

SOLAR ATTIC GABLE FANS: Using less than 1 amp, blows over 1000 CFM, 16" dia, about \$115 from Jade Mountain.

SURVIVAL EQUIPMENT

SEVERE COLD WEATHER CLOTHING

PALS SYSTEM --the very best in extreme cold weather clothing. Available in economical kits or ready-made suits (you add the outer shell by buying high quality Goretex outerwear. contact: PST (Preparedness and Survival Training Institute) in Utah at (801) 785-6027. Jim Phillip's website is www.jimsway.com and email is pst-utah@webtv.net. Ask for the Inner Thermal Lining Kits. They also have a complete video on the system and its construction.

TOOLS

Harbor Freight Tools: Deep discounted tools, some high quality, others mostly Chinese or Taiwanese. Retail stores in all western States plus Lexington, Kentucky. Info: www.harborfreight.com. Call for printed catalog, 1-800- 423-2567.

See other specialty catalogs in the Bibliography of The Secure Home.

Gerber Multi-Tool with nylon sheath. About \$42 at K-mart or Lonergan's Knives P.O. Box 1880 Glendale, Az 85311 Tel: (602)-930-9690 info: <http://village.ios.com/~ldch91a/>.

TRANSPORTATION EQUIPMENT

NEW FUEL EFFICIENT VEHICLES COMING ON THE MARKET

Toyota Prius (hybrid vehicle - gasoline/electric) 66 mpg. This vehicle is a computerized system to combine the efficiencies of the gasoline engine and the battery-driven electric motor all in one. It has regenerative braking, and automatically uses either or both engines as the situation demands. This, in my opinion, is the technology that is the most efficient and practical for some years to come.

Honda ZLEV (zero emission engine) available probably within a couple of years in Accord and Civic (77 mpg).

ELECTRIC BICYCLES

Plans to Convert a Mountain Bike: \$29 from Bill Gerosa, Convergence Tech., Inc., 12-6 Foxwood Drive, Pleasantville, NY 10570 Website: www.econvergence.net/emb.htm Tel: 914-773-6749

ZAP Power System: add-on package to motorize a mountain bike. Can still pedal with this system. ZAP SX Rear Drive: \$375.00 ZAP DX Rear Drive: \$449.99. Range 15 miles with SX and 8 miles with DX. Has regenerative charging of battery while going downhill and pedalling. Can buy their "Electric Cruiser" bicycle ready made for \$700-\$800 depending on SX or DX motor and a ready made mountain bike for \$900.

Charger Bicycles: <http://www.charger.com>. Electric bike designed from ground up - pedal assist system, dual chain, 20 mile range.

EV GLOBAL MOTORS: 1-800-871-4545. State of art internal electric motor in wheel hub: \$990-\$1,300 depending on accessories. <http://www.evglobal.com>.

US Pro Drive (Currie Technology - used in Schwinn Bikes) Van Nuys, CA 91406 Tel: (818) 947-0366. Here's a direct-drive adaptive system with a variable speed controller. The direct drive system mounts on the rear hub of most 26" bicycles and weighs 6 lbs. The battery shell locks. They're ramping up for production now. The power system sells for \$595; bike plus motor for \$899.

EV Rider, Inc., 1060 Commerce Boulevard, North, Sarasota, Florida 34243 USA Toll-Free: 888-RIDEREV(743-3738) Fax: 941-351-2699, <http://www.evrider.com>.

Electrobike, Inc. 818-565-5553 BAT International 818-565-5555, 818-565-5559 (fax). All three operate out of 3601 Empire Avenue, Burbank, CA 91505. Website: <http://www.baat.com> BAT Electrobike Outstanding Performance: Travels 18-20 mph on level ground. Assists rider up 5% grade hills at 13-15 mph. Lightweight Aerodynamic Design: Weighs less than 60 lbs Long Lasting/Long Range NiCd Batteries State-of-the-art Heinzmann 425 Watt Hub Motor. Not friction drive, this is direct drive, Front and Rear Suspension Shocks for Super-smooth Ride .

Smart Wheels P.O. BOX 2883, WORCESTER, MA 01613 Tel: (508) 791-3200 <http://www.smartwheel.com>. Smart Wheels Corp. develops, markets, and distributes high performance electric drive systems and components for bicycles and lightweight vehicles. They have developed a family of proprietary electric drive systems, including unique Hub Motors and ready-made Smart Wheels,

that can instantly power virtually any wheeled vehicle platform: bicycles, tricycles, wheel barrows, scooters, carts, and other (non-automotive) applications. The Smart Wheel uses the smallest high power hub motor available, only 6" in diameter and weighing less than 6 pounds! Inside this thin (3.2") hub is an 8-pole brushless DC pancake motor (made by Wellington Electric), a 23:1 speed reduction system, and a full 3-phase Pulse-Width Modulated control system. The simple to install Smart Wheel will be offered in 20", 26", and 700mm sizes, along with a line of compact battery packs and related accessories. Also available is the more powerful (500-900W) Power Box, designed to power the rearwheel via a chain and sprocket, which is ideal for powering heavier vehicles like trikes and tandem bikes.

ELECTRIC VEHICLE CONVERSIONS

This is the most economical way to get an electric vehicle. Convert a pickup or van to electric use with batteries and solar panels and have a short-range, reliable commute vehicle when gas becomes unavailable. Maximum range is typically 40 miles. The most experienced one stop shop for all necessary items is ELECTRO AUTOMOTIVE in California: www.electroauto.com or P.O. Box 1113, Felton Ca 95018-1113.

ELECTRIC VEHICLES (EV)

Honda EV PLUS - 60-80 mile range car with regenerative braking, nickel metal hydride batteries. It has a heat pump-type heater/air-conditioner to solve one of the normal dilemmas of electric vehicles (no heat or cooling). This is a very expensive vehicle to produce due to its high technology battery and drivetrain - so for now, it is only available to lease (no one would want to pay the purchase price).

MILITEC-1 OIL ADDITIVE

I think this is the best oil additive for all types of engines/transmissions - proven to double the life of an engine: 16 Oz bottle (Half a bottle added to engine oil every 15,000 miles) Retail \$30, J&A discount \$25 per 16oz bottle. Call J&A Specialty Products (801) 224-9139.

REDLINE OIL PRODUCTS

REDLINE Simply the best racing oils available. Too expensive for me, since I use Militec-1 anyway, I don't feel I need the pricy oil. But I do use their transmission fluids. In a long term crisis, I want the longest life out of the transmission, and these special fluids have proven to be at least twice as good as normal hypoid oil. These are products primarily for manual transmission and differentials. I use 2 oz of Militec-1 in automatic transmission for protection. Call J & A SpecialtyProducts at (801) 224-9139.

HIGH PERFORMANCE OIL FILTERS

AMSOIL <http://www.amsoil.com/prod.html> MSOIL INC. AMSOIL Building, Superior, Wisconsin 54880 Phone: (715) 392-7101. Amsoil makes a full range of very high performance synthetic oils and the best oil filter systems around.

WATER PURIFICATION/FILTERING EQUIPMENT OXYGEN BASED WATER PURIFIERS

Aerobic K07 potassium based water purifier (about \$20 each retail, local health food stores) J&A Specialty, (801) 224-9139 discounted to \$12 each plus shipping.

WATER FILTERS

AquaPrima II by Enrich International 1-800-748-4334 Info www.enrich.com (do website search for "aquaprima" (best pure filter system for removing chemicals out of domestic water supply). Faucet attached, no plumbing changes required. Retail: \$250, discounted by, J&A Specialty \$210."

Living Water by Alpine Air Products best system for purifying water that may have bacterial or other harmful pathogens. Uses filters plus Ozone and UV light. Retail: \$349. J&A Specialty discounted price \$299. Online Info: www.joelskousen.com (bottom of front page).

WEAPONS

BOWIE KNIFE: Western Cutlery 9-1/2" blade (about \$70) Lonergan's Knives Glendale AZ, see above. Info: <http://village.ios.com/~ldch91a/>
Gerber lock-blade folding knife.

Pepper Spray: Sabre Products, from tiny to 1 lb blaster bottles.

MAG-NA-PORT ARMS - recoil reduction mod to weapons. 41302 Executive Dr., Mt. Clemens, MI 48045 Tel: 1-313-469-6727.

MAG-SAFE AMMO: Special penetrating shotgun type ammo for auto weapons - deadly stuff. Joe Sambone, PO Box 5692, Olympia Wa, 98503. Tel: 1-206-456-4623.

TRITICON glowing night sights: Armson, 1-313-553-4960.

DILLON Reloading Press: best of the progressive reloading presses. <http://www.dillonprecision.com>.

SILENT .22 AMMO: CCI brand .ww CB CAP cartridges - at most gun shops.

Williams Trigger Specialties - smooth trigger mods RR 1, Box 26-G, White Heath, Il 61884, Tel: 1-217-762-7377.

DOG GARD High freq. dog repeller that really works. \$35 from Northwest Gun and Sports, 513 NE 6th St. Grants Pass, Ore, 97031.

WATER POWER

LARGE HYDRO-ELECTRIC SYSTEMS

James Leffel & Co., Product types: large hydro-powered electric generators. Service: system installation, Address: 1978 Commerce Circle, Springfield, OH 45504-2012 Telephone: 937-322-0116 E-mail: leffel@interaxs.net.

Hydro West Group, Inc. Manufacturer, service, large hydro-powered electric generators, complete system design (50 kW), microhydro electric generators, hydro energy components, hydro turbines. Address: 1422 130th Avenue N.E., Bellevue, WA 98166 Telephone: (425) 455-0234 Web Site: <http://hydrowest.com>, E-mail: turbines@hydrowest.com.

American Hydro Corporation Custom design and manufactured upgrades for existing hydroturbines to boost output by 10 to 50%. Service : system design and installation. Address: 135 Stonewood Road, P.O. Box 3628, York, PA 17402-0136 Telephone: (717) 755-5300 Web Site: <http://www.ahydro.com> E-mail: ahc@netrax.net.

MEDIUM-SIZED HYDRO

Canyon Industries, Inc. Builds and engineers pelton and cross-flow turbines for medium head hydro conditions. Good hands-on experience. Call Dan New (360) 592-5552. P O Box 574 HP, Deming, WA 98244. URL: www.canyonindustriesinc.com

MICRO-HYDRO

Harris Pelton Turbines High head turbines (200-600 vertical feet of drop) 2, 3 or 4, nozzle designs. \$500-1000 depending upon power. Abraham Solar Equipment.

Turgo Pelton Wheels - slightly better than Harris units: from Abraham Solar Equipment.

Lil Otto Hydroworks Manufacturer of very small microhydro powered electric generators. Address: P.O. Box 203, Hornbrook, CA USA 96044 Telephone: (916) 475-3402 E-mail: econnect@snowcrest.net.

LOW RPM PERMANENT MAGNET DC GENERATORS

Build your own wind generator, steam, hydro, pedal power, animal power, tidal power, or new invention stainless steel brushless generators. Models rated from 80 to 1000 watts. 4 amp \$198.00 5 amp \$198.00 20 amp \$489, from Jade Mountain.

FLOATING TURBINE AND WATER PUMPER

AQUAIR Submersible 8 Amp generator (place in stream or in a 14" plastic pipe in a stream to generator low flow power.)

A much bigger unit of a totally different design is the Australian Tyson Turbine. The Tyson is suspended in the water by two pontoons tethered to the banks, bridge, or pier by means of a steel cable. The flow of the river rotates the large, submerged turbine head which is attached to a right angle gear box. This transmits the power above water level to an electric generator by a pulley. This system can generate low voltage DC for charging batteries or higher voltages to transmit power up to 100 yards. Power can be unregulated AC which is transformed and rectified to low voltage DC where required. Outputs up to 1,500W/hr can be generated depending on water flow rate. The Tyson unit also pumps water to shore as well. So this is a machine that is ideal for a self-sufficient homestead on a good-sized stream. The minimum depth for this unit is 2 meters of water - about six feet, thus, a small dam would have to be built on shallow streams in order to provide the clearance. Max Power output is 130 amps at 12v or 65 amps at 24v.

Tyson Turbines, Australian large size submersible, combined with water pumping system - about US \$10,000 plus shipping. Telephone: 61 - 2 - 6928 5531 (within Australia: 02 - 6928 5531) Fax: 61-2-6928 5567 (within Australia: 02-6928 5567) address Mr Warren Tyson, "Ronleigh," Albury Rd, Wagga Wagga, NSW 2650, Australia. Email tysonsturbine@ozemail.com.au.

SUBMERSIBLE GENERATORS

The most reliable and long standing is a French firm, called LEROY-SOMER, Inc. They manufacture the "Hydrolec" unit in sizes varying from 5 to 50 kw. There is no American importer that I can locate at present.

WIND POWER

WIND GENERATORS

Best of the Small Windchargers:

AIR 403- costs about \$550 for the new 400 watt machine (installation is cheap and easy because this system is so small and portable). Abraham Solar 1-800-222-4727 or Southwest Windpower. website: http://www.windsun.com/pv_stuff/Air.htm

Best of the Medium sized Windchargers:

WHISPER Corp. builds excellent units from 600 watts to 4500 watts - cost all below \$2.00 a watt. Contact AZAP POWER Tel: (514) 369-4919 Fax: (514) 369-4817 Fax Toll Free. Orders: (800) 797-9634.

WINDMILLS FOR WATER WELLS

Dean Bennett Supply (many types) Toll Free: 800-621-4291.

Ohio Windmill & Pump Company, Inc. 8389 State Rt 534, Berlin Center, Ohio 44401 Tel: (330) 547-6300 (They carry many types).

Bowjon Windmills and Air Pumps: This is the only windmill which doesn't have to stand over the well head. It drives an air compressor which leads to an air-driven pump in the well. Bowjon International. 11580 Lawton Court, Loma Linda, CA USA 92354 Telephone: (909) 796-7199 URL <http://home1.gte.net/bowjonin/indx.htm>.

How Secure is Your Home?

Securing your home and protecting your family requires more than simply installing solid door locks and a security system. As people in the Northeast discovered during the 1998 winter ice storms, crime is only one type of misfortune that can strike a family.

To illustrate, take the following quiz about the security of your home:

1. How would you keep your house from freezing in the winter if electricity were unavailable for a long period of time? Do you have some type of wood burning heater? What about hot water?
2. Do you have back-up cooking facilities if an earthquake made natural gas unavailable for a month or two? Could you heat hot water?
3. What if you lose both electricity and gas?
4. Would you be willing to rely on batteries and candles for illumination if a major power outage lasted more than a week?
5. Do you have extra tanks of potable water should public water supplies be cut off or contaminated? Would you know how to collect and filter your own water if none was available for a long time?
6. If a winter storm damaged windows in your home, would you have sufficient plastic sheeting and repair materials to quickly enclose the open areas to retain heat?

If you answered "No" to any one of the above questions, your home is NOT secured, and your family is NOT protected.

"But I live in a thriving area," you say. "Surely my family will have access to these necessities within a short time." Most of the time, yes. But maybe not, if a major crisis strikes. For example, what happens if:

a labor crisis brings the inflow of food and business goods to a halt?

an economic crisis threatens your pensions, investments, and other so-called "guaranteed" income?

a major earthquake or other natural disaster suddenly upsets the natural social order for months at a time?

a crisis is followed by massive social unrest? Do you have contingency plans to exit an urban area if freeways are clogged?

terrorists attack your area with chemical or biological weapons?

the unthinkable happens: nuclear war?

It's easy to dismiss these threats during times of peace and prosperity, but I assure you they are real. Not only that, but the probability of such events coming to pass increases every year. But there are ways to protect your home, and places where your family can be safe. For an in-depth analysis of North America's safest places to live, see my book, *Strategic Relocation: North American Guide to Safe Places*. For a few easy, low-cost remodeling solutions that will give your home and family the ability to handle multiple crises, read on.

Light and Electricity

For light during power outages, install a few roof-mounted, photo-electric solar panels. Connect the panels through a mini-regulator to four golf-cart batteries. You can also buy a small, 12- to 110-volt inverter and use these batteries to power some essential electronics that will help you find out what is happening during a crisis, such as a computer, radio, or small television. I have small, RV-type

fluorescent lights mounted on the walls of every major room in my house. When the power goes off (which it does fairly often) I just flick on the auxiliary lighting and go about my business.

You can also install a portable generator, just don't forget the fuel to run it! And avoid expensive brand name generators like Kohler and Onan; Sam's Clubs, Home Depots, and Costcos often carry these items at a quarter of the brand-name price. Always get generators with at least 4500 watts output so you can run a refrigerator or freezer. My book, *The Secure Home*, outlines how to connect the generator right up to your house circuits without costly switching equipment.

The cost for light, and for vital information during a crisis? Less than \$1,000.

Water Supplies

For an additional water source, you could also install a second hot water tank next to your present tank. Just plumb it so that incoming water flows through the first tank before going into the second. Then strap both tanks securely to the wall to keep them from toppling over during an earthquake.

If your main tank is gas, make the auxiliary one electric. Just keep the element off until you need it. Even if you don't need the extra hot water yet, the second tank will serve as a constant reserve of fresh water in case of a shortage. My book, *The Secure Home*, contains a complete, easy-to-read plumbing schematic.

The cost of ensuring your family has sufficient water supplies during a crisis? Less than \$250.

Self Defense

What will you do if your house is broken into while you and your family are sleeping? Do you have an early warning system? How can you protect your family? Gun battles in your home can be deadly for you and your family, read about modifying your home with an impregnable security shelter that will protect your family from most any kind of assault in my special report, *How To Implement a High Security Shelter in the Home*. This information is also included in my book, *The Secure Home*.

Cooking

Cook with gas? If so, then buy an electric hot plate or skillet to back up your gas unit. If you rely on natural gas, you can buy a set of alternative LP jets for your range and switch to LP gas during an emergency. While the outlay for an LP gas tank is somewhat expensive up front (about \$1 per gallon of storage), the stored gas will keep indefinitely.

A cheaper alternative is to buy two to four 20-lb propane BBQ cylinders and hook them up to a small, propane camp stove. This is best if you normally cook with electricity. You can read more about these options in *The Secure Home*.

The cost of keeping your family fed during an emergency? Between \$100-\$500.

Heating

If you live in a cold climate, always have some backup wood heating available, preferably an air-tight stove. Not only will this ensure that your family stays warm if the electricity fails, but the heat will also keep your pipes from freezing.

When installing a wood-burning stove, it's best to put it in the basement so that the rising warm air will heat the rest of the house. Most stoves today also come with an optional hot water heating coil, which you should always order and hook up to an auxiliary water-heating tank. This will allow you to have hot water even if there is no electricity or gas. Find out more about alternative heating options in my book, *The Secure Home*.

The cost for protecting your family and home against the elements? About \$1,200-1,800. Add another \$500 for installation of the hot water heating option.

Food and Other Essentials

Finally, stockpile essentials in advance. "Essentials" includes not only food and water, but supplies you might need during an emergency. Imagine you need to fix something but can't run to the store. And even if you could, it's unlikely you'd find what you needed, since most stores are cleaned out in a matter of hours during crises. You can find several complete stockpiling and storage lists in my special report, *10 Packs for Survival*.

THE SECURE HOME --Architectural Design, Construction, and Remodeling of Self-Sufficient Residences and Retreats

3rd Edition, 1999. 700 pages, oversized, illustrated with 100 architectural details and drawings. \$45 plus \$9 s/h from Swift Publishing 1-800-292-2831 (order desk only), or by check or money order, mailed to Joel Skousen 290 West 580 South, Orem, Ut, 84058. Sorry to have to charge so much shipping but this book is huge--it's like mailing a ream of paper.

CONCEPT:

The *Secure Home* is the long-awaited update of *The Survival Home Manual*, Skousen's popular book last published in 1982. A near-total rewrite that's nearly twice the size of the original, *The Secure Home* contains dozens of new technical and equipment recommendations. The book will give you information from A to Z that will help you create a high-security residence or retreat, from initial design strategies to construction details and self-sufficiency systems integration. And many would argue that the final section of recommended products and sources is worth the price of the book alone, for the time it will save you in search for suppliers!

The new edition contains five major sections, including:

General Philosophy and Strategies for Security and Self-Sufficiency

Planning: Designing for new construction and remodeling

Integration of Security and Self-sufficiency Systems

Construction and Implementation

Listing and Descriptions of Recommended Equipment and Suppliers

While the body of the book only refers to the design and implementation of generic systems such as wood stoves, solar water heaters, and inverter/battery systems, the final section details the pros and cons of specific equipment. This means that future updates of the book will only include a revised final section. You can also find the most recent version of this section online at any time, allowing you to update *The Secure Home* free at any time