

**Sharon Packer: How to prepare and not panic
at the thought of domestic terrorism.**

Iran's newer, longer-range ballistic missiles.

Journal of

Civil Defense

The American Civil Defense Association

Winter 1997-98 • \$4.50

COMBATING

TERRORISM

AT HOME

The 'NBC' Difference

by Douglas J. Gillert

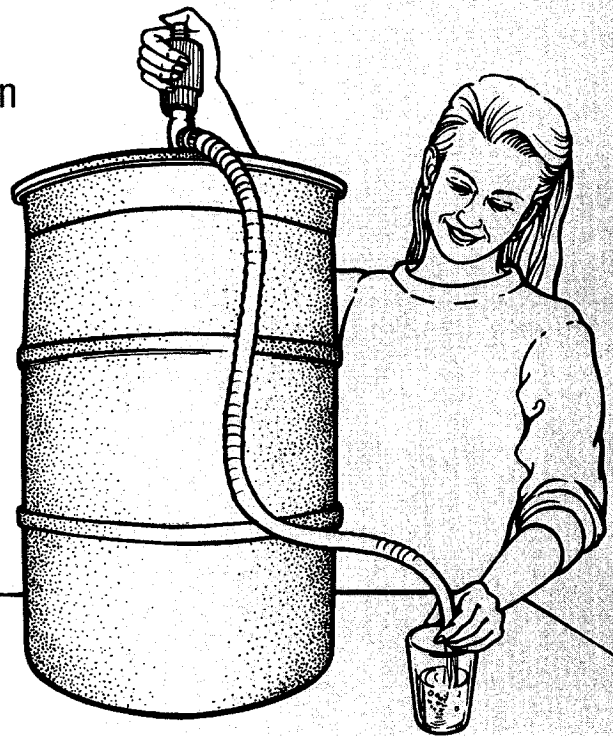
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To our readers...

No longer only the stuff of spy thrillers, domestic terrorism — involving nuclear-biological-chemical weapons — is threatening America's security in ways once thought unthinkable.

Starting on page 2, Douglas J. Gillert explains how emergency professionals from cities across the country are literally dressing up for the challenge.

With the world's attention focused on Iraq's arsenal, Iran has been quietly developing its own awesome weapons. Kevin Briggs says new Iranian missiles are capable of going farther and harder. Read his Washington Perspective column on page 3.

Preparedness expert James T. Stevens explains how to figure your family's annual make-or-buy. A pretty easy formula gets rid of the guess work. Sharpen your pencil and visit Stevens' Prepared Pantry column on page 4.

Worried about an anthrax attack? Forget the animal vaccine. There are other ways to deal with the threat, according to Sharon Packer on page 13.

You'll note we now spell Tacda with upper and lower case letters. The Tacda Letter explains why on page 16.

The Tacda Store Catalog is back on the Journal's centerfold. The featured pocket dosimeter meets military specs for shock, vibration and immersion, and can detect fallout and accidental equipment radiation.

The Tacda staff

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Surviving Terrorism.

Do: Buy a shelter.
(It's cheaper than you think).

Don't: Take the animal anthrax vaccine.

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Iran's Ballistic Missiles.

Their range is neither theoretical nor short, reports Kevin Briggs
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The *Journal of Civil Defense* is the official quarterly of The American Civil Defense Association (Tacda), P.O. Box 910, Starke, Fla. 32091; Kevin Briggs, president; Kathy Eiland, executive director. Tacda urges government and citizens alike to maintain sensible precautions for disasters — natural and manmade.

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by Kevin Briggs

Iranian Update



Here's a snapshot of recent legislation and reports on troublesome developments in Iran:

Iran Missile Proliferation Sanctions Act: The House passed this act on Nov. 12, 1997, in response to reports that Iran is dangerously near to being able to produce ballistic missiles. The act imposes sanctions on any company that transfers missile technology to Iran and is principally aimed at curbing technology transfers to Iran from Russia. Iran is reportedly about one year away from producing the Shehab-3 ballistic missile that can threaten Israel and perhaps three years away from producing the Shehab-4 with a range that can threaten Central Europe. One can only wonder how many years away the Iranians are from producing ballistic missiles that could reach American cities. [Sources: *The Near East Report*, Nov. 17, 1997, pages 1-2, and *The Washington Times*, Jan. 19, 1998, page A12].

Proliferation Primer Report: This Senate report was released in January 1998 and points to disturbing trends with Russia's ongoing nuclear weapons-related "business" connections with Iran. The report notes that Russia is still proceeding with an \$800 million deal to build a 1,000-megawatt nuclear reactor near the Persian Gulf by August 2000. The report states: "In January of 1997, Russia's cash-starved nuclear industry announced plans to boost exports to \$3.5 billion per year by the year 2000 by increasing sales to China, Iran and India." The report went on to say: "Russia's willingness to transfer nuclear technology to Iran appears motivated primarily by commercial interests and, to a lesser extent, to improve relations with Teheran." [Source: *The Washington Times*, Jan. 19, 1998, page A12].

Congressional Record: The Senate published this additional information in its Senate Concurrent Resolution 25, dated May 5, 1997:

"(a) Findings: The Congress finds that: (1) Iran is aggressively pursuing a program to acquire and/or develop nuclear weapons, (2) the Director of Central Intelligence...confirmed that Iran is manufacturing and stockpiling chemical weapons, (3) Iran...continues to support the terrorist group Hezbollah in Lebanon and radical Palestinian groups,...(9) the Russian Federation continues to move forward on implementing a commercial agreement to provide Iran with critical nuclear technology despite having been provided with detailed information by the President of the United States on Iran's nuclear weapons program...(b) Sense of Congress: It is the sense of Congress that: (1) the Russian Federation should be strongly condemned...[Source: Congressional Record, page S3968].

All of the above continues to show that at least one terrorist-sponsoring state (that has referred to the United States as "Satan") is now many steps closer to posing viable nuclear, chemical, and missile threats to our homeland. We should applaud the recent initiatives of Congress and continue to prepare for the potential of terrorist attacks against our infrastructure and families. Please see the Tacda Letter to get an idea of some practical ways to promote preparedness and be prepared. □

Kevin Briggs is president of The American Civil Defense Association.

Views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or U.S. government.

'The Greatest Threat'

Could Iraq use biological or chemical weapons against the United States? Few people doubt this Persian Gulf country has the will and means to use such weapons against Americans on their soil.

The consequences of a biological agent like anthrax would be devastating. "Just one-ninth of a millionth of a gram of anthrax is fatal to within five to seven days," U. S. Defense Secretary William Cohen warns. "And anthrax is a very long-lasting, shelf-stable biological agent that can be stored for long periods of time. I think it's quite possible that [Iraq has] some of that stored."

Over the past five years, at least 11 states and many nations have experienced terrorist incidents. Among the widely publicized events were the bombing of the New York City World Trade Center in 1993, the sarin attack on the Tokyo subway system in 1995, the bombing of the Alfred P. Murrah federal building in Oklahoma City in 1995, and the Centennial Park bombing in Atlanta in 1996.

With increasing availability of raw materials and technology from worldwide sources, the potential use of

weapons of mass destruction by subversive groups has risen dramatically.

"I believe the proliferation of weapons of mass destruction presents the greatest threat that the world has ever known," Cohen said during his U. S. Senate confirmation hearing in January 1997. "We are finding more and more countries who are acquiring technology — not only missile technology — and are developing chemical weapons and biological weapons capabilities to be used in theater and also on a long-range basis. So I think that is perhaps the greatest threat any of us will face in the coming years."

What's being done to protect American cities and citizens from this threat? Ultimately, there's

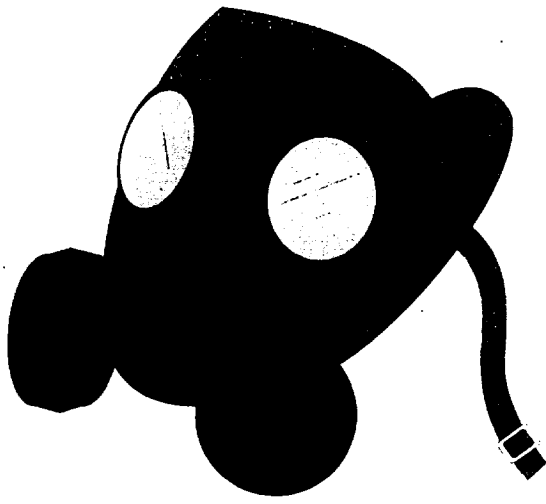
really no known way to prevent such attacks from occurring, federal, state and city officials admit. The only precaution is for Americans to be trained and ready to detect, stop when possible and respond when necessary.

As Douglas J. Gillert reports on the following pages, the congressionally funded DOMESTIC PREPAREDNESS PROGRAM may be the best current solution.

Read on.



Chemical protection mask: necessary precaution for Americans?



Combating Terrorism at Home

As if they didn't face enough problems and threats, American cities today must confront a new menace — nuclear-biological-chemical terrorism. No wonder the cities' emergency professionals are quickly learning the "NBC" difference.

by Douglas J. Gillert

Photos by Bob Wickley

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The brave, the few, the underequipped, undertrained.

The challenge of detecting and combating domestic terrorism falls largely on the shoulders of police and fire departments, emergency medicine and other municipal agencies, as well as air and ground transportation authorities.

But far too often, these agencies aren't equipped or trained to deal with individuals and groups bent on violence as a means of achieving political objectives. As brave as the emergency professionals are, they need help.

"It is not only a matter of fairness to the men and women who devote their lives to our safety, but also a practical matter of keeping alive and healthy the people we depend on in a crisis," says

Indiana Sen. Richard Lugar. Lugar, Sen. Pete Domenici of New Mexico and former Sen. Sam Nunn of Georgia sponsored legislation providing funds for the Department of Defense to begin conducting domestic preparedness training in major U.S. cities in 1997 (see sidebar, "Anti-terrorist Team").

Under the initiative, DoD leads an interagency effort that will enhance the capability of federal, state and local emergency "first responders" to incidents involving nuclear, biological and chemical terrorism. The Army Chemical and Biological Defense Command at Aberdeen Proving Ground, Md., serves as DoD's executive agent for the initiative, which includes representa-

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City of San Antonio paramedic Allen Hargrave tries on a quick-don chemical protection mask during domestic preparedness training in the Alamo City.



continued from page 4

tives of the Federal Bureau of Investigation, Federal Emergency Management Agency, Department of Energy, Environmental Protection Agency and Department of Health and Human Services. Three multi-agency teams to date have provided training in seven of the 120 cities they will visit during the next several years.

"We recognize that the first responders are a highly trained, professional community, because they respond on a daily basis to hazardous incidents," said Army Lt. Col. John Ontiveros, deputy to the program director at Aberdeen. "We're providing what we call the 'NBC [nuclear-biological-chemical] difference.'

"Basically, the training and assistance

we provide covers four categories: protection, detection, decontamination and training aids to perpetuate the training they're receiving, in order to take that training down to other first responders in their communities."

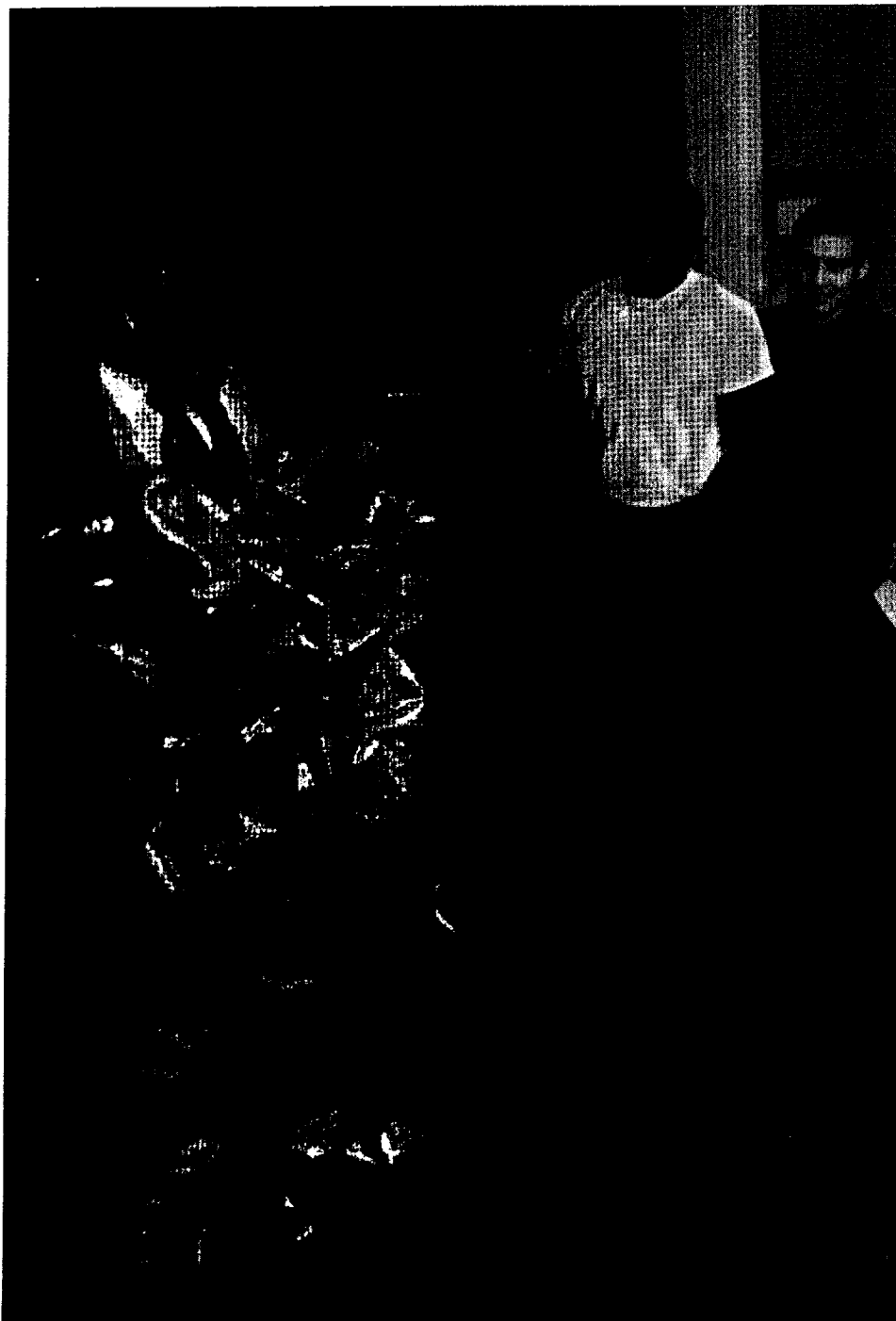
The specialized defense training and information the DoD anti-terrorist teams provide will enable emergency workers to "respond knowledgeably, safely and in such a manner that they can save lives and minimize damage," Ontiveros said.

Defense has taken a train-the-trainer approach frequently used to prepare military instructors and applied it to the domestic preparedness program. Six courses range from basic emergency responder awareness and operations training to advanced-level training for medical or hazardous materials technicians and incident commanders.

Basic courses cover:

- **Responder awareness** — Teaches firefighters, police officers, HAZMET (hazardous materials) teams and 911 dispatchers actions to take, how to look at certain situations and be aware of agents and their capabilities;
- **Responder operations** — Teaches incident response teams and emergency medical technicians precautions and actions to take when entering a HAZMET zone; and
- **Incident command structure** — Teaches incident commanders how to lead and direct a response to an NBC terrorism incident.

The technician training component of the program encompasses three ad-



Left: Preparedness trainer Kevin Toomey of EAI Corp. demonstrates how to use a portable decontamination booth in a chemical environment.

vanced-level sessions for HAZMET responders, emergency medical service providers and hospitals. Available courses include:

- **HAZMET** — Builds upon existing hazardous materials response capability. Students learn the difference between responding to nuclear, biological or chemical terrorist attacks;
- **Emergency medical service** — Teaches emergency technicians and paramedics different responses required for nuclear, biological or chemical incidents; and
- **Hospital providers** — Teaches physicians and nurses proper treatment of NBC victims.

Following an attack with many casualties, Ontiveros said, medics must stabilize, decontaminate and transport the injured to hospitals. Hospitals must be aware that many people may walk in; this happened in Tokyo after the sarin nerve gas attack on the city's subway system in 1995. Tokyo hospitals weren't prepared, he said; they lacked decontamination equipment and in many cases the knowledge and skill to properly treat the heavy onslaught of the survivors. One of the trainers' most successful programs is having physicians on the team talk to physicians in the communities who would respond to a terrorist event.

Before sending a team to a training site, DoD talks to city officials to see what kinds of training they need. "We ask them how they're already set up to respond," Ontiveros explained. "What arrangements and agreements do they have between not only their own internal organization — fire, law, EMS, hospitals — but with their surrounding communities? A lot of communities have mutual aid pacts. Because they

don't have the resources to handle a four-alarm fire or something that large, they call surrounding jurisdictions for assistance.

“
There has to be
some significant
training for all
first responders.
”

“So we ask them, ‘Who’s your target population and who do you have mutual aid agreements with?’ That way, we can bring them in as part of the training audience.”

One of the cities to receive the training in 1997, Boston, brought as many players to the table as possible to take advantage of the federal training.

“We brought in not only the typical emergency responders but hospital pro-

Above: San Antonio firefighter Raul Calderon (left) decontaminates fellow firefighter Steve Rodriguez during a hazardous materials demonstration.

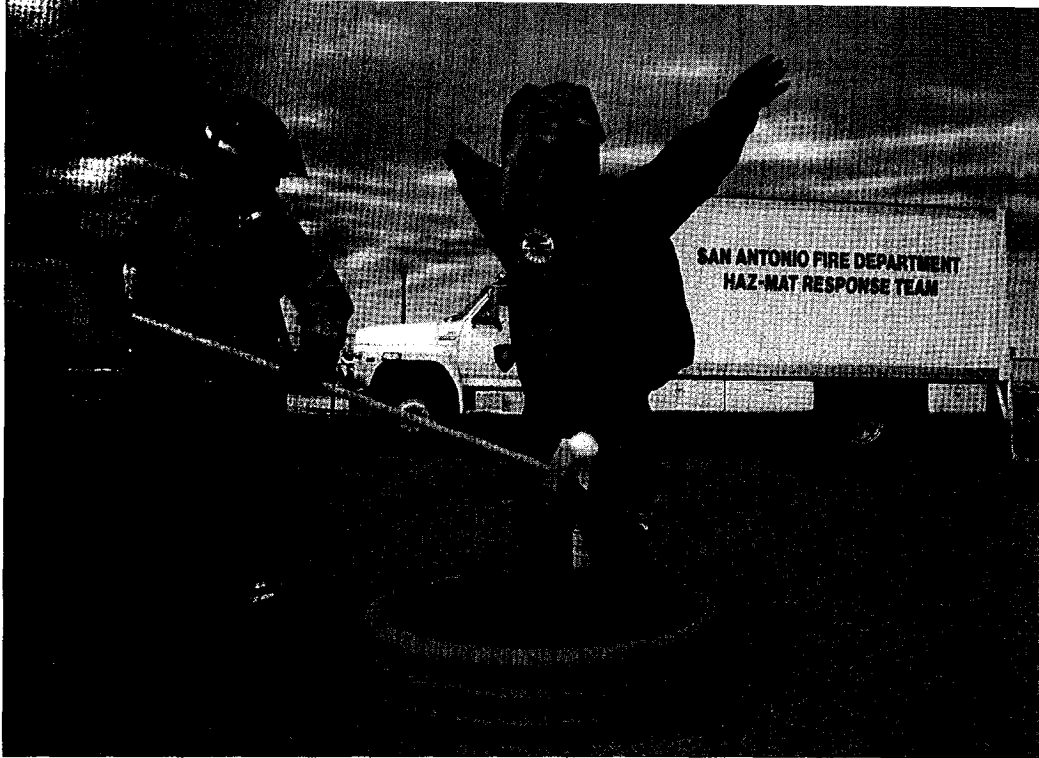
viders as well,” said Rich Serino, superintendent and chief of Boston Emergency Medical Services. “If Boston gets hit by a weapon of mass destruction, the hospitals are going to see mass casualties, and they need to know how to deal with that.

“We also included transit officials, because transit sites will be key terrorist targets,” Serino said. “The training for them is important, especially in making them aware of what a weapon of mass destruction device may look like and where it may be planted.”

Serino said the federal agencies’ sharing of expertise and information far exceeded local expectations. “It opened our eyes that there has to be some significant training for all first responders.”

Now Boston has to figure out a way to share some of the equipment that

continued on page 10



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did originally (prior to the water being removed). Included in this one-year supply for two people are the following [note: numbers in brackets represent how many #10 size (~ gallon size) cans of each item are included]: fruit cocktail [1], applesauce [1], apple and banana slices [2], raisins [1], potato granules [1], corn [1], carrot dices [1], tomato powder [1], chopped onions [1], salt [1], nonfat milk [24], pinto beans [6], elbow macaroni [6], rice [6], whole wheat flour [12], hard red wheat [12], cracked wheat cereal [12], white sugar [6], peas [1], cabbage [1], bacon [1] / beef [3] / chicken [2] flavored TVP, fruit flavored gelatin [1], soup base [1], shortening [2], margarine [2], cheese [1], eggs [2], a sprouting kit with Alaska peas/wheat/ lentils/ sprouting trays & cookbook, 32 lids for #10 cans and 3 lids for #2 cans (lids help maintain freshness after opening).

Recommended water storage for use with this food is 275 gallons.

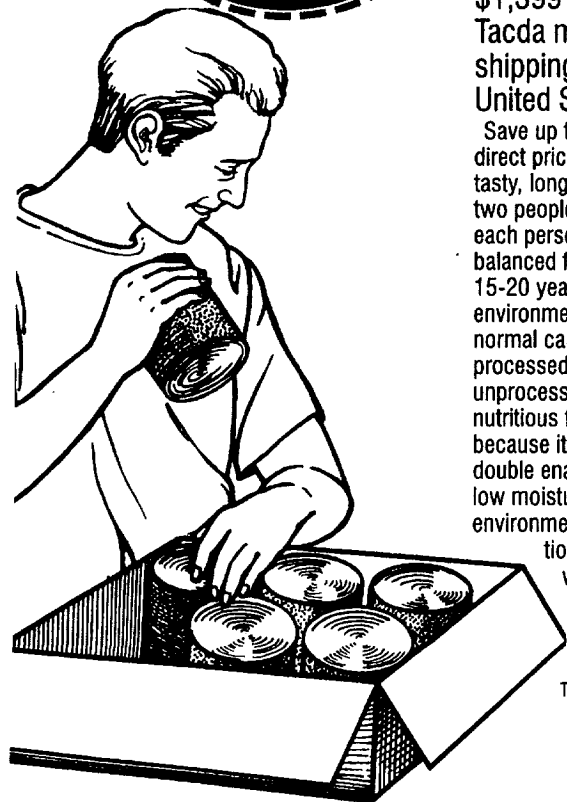
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Three-month food supply for one person. \$340 (higher for non-Tacda members). Free shipping in continental United States.

Save as much as \$100 off the factory direct price (with shipping) on a three-month supply of food for one person. This unit yields more generous servings than Offer #1 on a per-day basis. It is stored in the same containers and can store well for 15-20 years. Included in this three-month supply is the following: #10 size (~ gallon size) cans: fruit cocktail [1], banana slices [1], egg solids [1], regular nonfat milk [3], potato dices [1], sweet corn [1], green peas [1], potato granules [1], cracked wheat cereal [1], chicken [1] / beef [1] flavored TVP, elbow macaroni [1], parboiled rice [1], split peas [1], margarine powder [1], #2 1/2 can size: beef soup base [1], tomato powder [1], bacon flavored TVP [1], chopped onions [1], no bake custard [1], cheese powder [1].

Recommended water storage: 55 gallons.

Offer 3
Only for Tacda members. 30 & 55 Gallon Water Barrels for only \$48 and \$67. Free shipping in continental United States.

Save with direct pricing. These are new, heavy-duty, food grade USDA approved plastic barrels patterned after steel drums. These thick-walled units will never rust. Each barrel has two large filling openings (bungs) — one threaded with standard course NPT threads the other with a fine threaded bung stopper. Both are fitted with "O" ring seals.



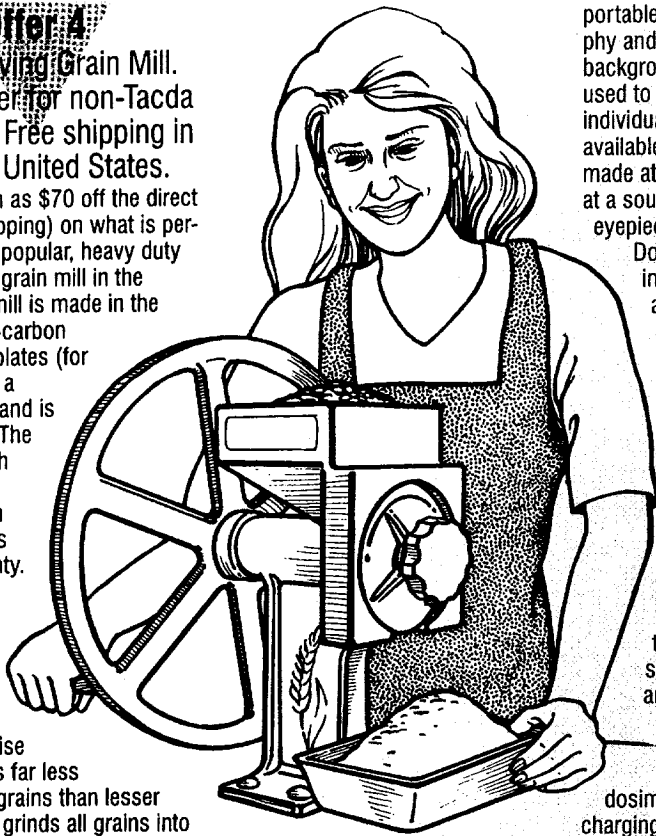
Tacda Store illustrations by Pamela Thornbloom



Offer 4

Country Living Grain Mill.
\$312 (higher for non-Tacda members). Free shipping in continental United States.

Save as much as \$70 off the direct price (with shipping) on what is perhaps the most popular, heavy duty hand operated grain mill in the country. This mill is made in the USA with high-carbon steel grinding plates (for finer flour than a stone grinder) and is easy to clean. The mill comes with industrial ball bearings which contribute to its 20 year warranty. It's unique fly-wheel has a V-shaped groove for adapting to an electric motor or exercise bike. It requires far less effort to grind grains than lesser quality mills. It grinds all grains into flour with adjustments ranging from fine to coarse grits.



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portable radiography and angiography and can monitor normal background radiation. A metal clip is used to attach the dosimeter to an individual's pocket or to any available object. A reading may be made at any time by merely looking at a source of light through the eyepiece end of the instrument.

Dosimeters may be totally immersed in water without affecting the instrument readings. Before dosimeters can be used to measure radiation, they must be charged. This will be done prior to shipping but must be redone periodically (typically every year for the most sensitive models). Tacda would perform this recharging for free for the life of the instrument (other than for

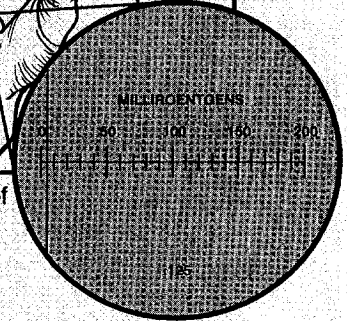
the necessary shipping and handling charges).

Most all available dosimeter charging units may be used to charge these models. Because the dosimeter scale is linear, it is possible to determine the total amount of radiation exposure for any selected period of time. Dosimeters are accurate to within +/- 10% of true dose.

Dosimeters can operate in temperature ranges of - 20 C to + 50 C and can operate up to altitudes of 50,000 feet and 90+% humidity. Models 742 and 746 would be perfect for fallout emergencies or possible dangerous short-term radiation exposures. Dosimeters come with a two-year limited warranty. Please order by model number.

Model (and range):

- 138 (0 - 200 mR)
- 138-S (0 - 2 mSv)
- 720 (0 - 2 R)
- 725 (0 - 5)
- 730 (0 - 20 R)
- 742 (0 - 200 R)
- 746 (0 - 600 R)



Offer 5

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Address, ZIP, and phone. Specify items and quantity. Please make any checks to Tacda.

Paramedics from the San Antonio Fire Department evaluate a "casualty" in a triage training situation. In a nuclear-biological-chemical disaster, these "first responders" would have only 90 seconds to evaluate what should be done with each victim.

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would be needed following an attack producing mass casualties and property destruction. "That's the next big hurdle," Serino said, "getting the equipment so that cities are able to handle an incident should it happen. We know now what we will need."

They also know a lot better where to find some of the equipment, he said. By bringing together representatives from city, state and federal agencies based in the Greater Boston area, officials there learned who has what.

New, specialized equipment most

likely would come from the commercial sector, Ontiveros said. "For its own operations, the Army is moving toward commercial equipment," he said. "For example, if you look at the chemical depots, the maintenance workers wear commercial clothing and protective equipment when they go inside the bunkers.

"We're testing some commercial equipment to determine its suitability in the chemical and biological agent environment," he added. And, rather than develop something new and unfamiliar to municipal emergency work-

ers, the Army is testing things civil responders should be familiar with and in fact may already use, he said.

Organize, then train

Before they can determine their needs for training and follow-on equipment, cities need to take an accurate measure of their human resources. Serino suggests cities targeted for the training shouldn't wait until after the training to organize. "No one depart-

ment or agency can handle weapons of mass destruction," he said. "Before the trainers arrive, put together a team and get an idea of what you need. That way, the training can be tailored to your city."

Defense facilitates such tailoring by talking with city officials before the trainers arrive. "The city is the customer," said Suzanne Fournier, a Chemical Biological Defense Command spokeswoman. "We encourage the metropolitan jurisdictions to get involved, so it's not just the city but also the outlying suburban areas they use as their response team. But they determine who comes to the training, what type of training they would like and where it's going to be held. We're there to serve them."

Of the cities trained so far, most of them enthusiastically shared results of the training with city residents, according to Fournier. Philadelphia, Boston and Detroit held press conferences, and Detroit Mayor Dennis Archer "made a lot of positive statements" about the program," she said.

Partners for life

The city-federal partnership won't end when the initial training is over, Ontiveros promises. The program progresses through three phases, he said, from basic to intermediate to long-term. A tabletop exercise reinforces the training they received during the instructional period, he said. "Then, after we leave," he said, "the city is responsible for going out and training other first responders. Six months later, we'll come back and do what we call a 'muddy boot' or functional exercise, where they select certain elements to participate.

"We want them to find out where they need to improve and identify any holes

continued on page 12

Anti-terrorist team targets 120 U.S. cities

Over the next three to four years, the DoD domestic preparedness team will help 120 U.S. cities prepare for possible chemical and biological terrorist attacks.

Formed in fiscal 1997, the team has already provided training to Boston, Chicago, Detroit, Honolulu, Los Angeles, New York, Philadelphia and San Antonio. Other cities on the team schedule are shown below. — *Douglas J. Gillert*

Houston	Atlanta	St. Petersburg, Fla.	Columbus, Ohio
San Diego	Virginia Beach, Va.	Rochester, N.Y.	Spokane, Wash.
Dallas	Albuquerque, N.M.	Jersey City, N.J.	Tacoma, Wash.
Phoenix	Oakland, Calif.	Riverside, Calif.	Little Rock, Ark.
San Jose, Calif.	Pittsburgh	Anchorage, Alaska	Bakersfield, Calif.
Baltimore	Sacramento, Calif.	Lexington-Fayette, Ky.	Freemont, Calif.
Indianapolis	Minneapolis, Minn.	Akron, Ohio	Fort Wayne, Ind.
San Francisco	Tulsa, Ohio	Aurora, Colo.	Newport News, Va.
Jacksonville, Fla.	Cincinnati	Baton Rouge, La.	Arlington, Va.
Columbus, Ohio	Miami	Raleigh, N.C.	Worcester, Mass.
Milwaukee	Fresno, Calif.	Stockton, Calif.	Knoxville, Tenn.
Memphis, Tenn.	Omaha, Neb.	Richmond, Va.	Modesto, Calif.
Washington	Toledo, Ohio	Shreveport, La.	Orlando, Fla.
Seattle, Wash.	Buffalo, N.Y.	Jackson, Miss.	San Bernardino, Calif.
El Paso, Texas	Wichita, Kan.	Mobile, Ala.	Syracuse, N.Y.
Cleveland	Santa Ana, Calif.	Des Moines, Iowa	Providence, R.I.
New Orleans	Mesa, Ariz.	Lincoln, Neb.	Salt Lake City
Nashville, Tenn.	Colorado Springs, Colo.	Madison, Wis.	Huntsville, Ala.
Denver	Tampa, Fla.	Grand Rapids, Mich.	Amarillo, Texas
Austin, Texas	Newark, N.J.	Yonkers, N.Y.	Springfield, Mass.
Fort Worth, Texas	St. Paul, Minn.	Hialeah, Fla.	Irving, Texas
Oklahoma City	Louisville, Ky.	Montgomery, Ala.	Chattanooga, Tenn.
Portland, Ore.	Anaheim, Calif.	Lubbock, Texas	Chesapeake, Va.
Kansas City, Mo.	Birmingham, Ala.	Greensboro, N.C.	Kansas City, Kan.
Long Beach, Calif.	Arlington, Texas	Dayton, Ohio	Metairie, La.
Tucson, Ariz.	Norfolk, Va.	Huntington Beach, Calif.	Ft. Lauderdale, Fla.
St. Louis	Las Vegas, Nev.	Garland, Texas	Glendale, Ariz.
Charlotte, N.C.	Corpus Christi, Texas	Glendale, Calif.	Warren, Mich.

Below: San Antonio Mayor Howard W. Peak announces a federal \$300,000 grant for preparedness training and equipment.



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in the program. Is there a training course that will cover a particular deficiency? Is there equipment that would be helpful?"

Finally, the Domestic Preparedness Program will build on existing relationships between the cities and the federal infrastructure already in place in most large metropolises — including FEMA, Energy and the EPA. Long-term, the cities will work with their counterparts in these agencies to conduct additional exercises.

"The long-term goal has to be to institutionalize the program in order for it to really become ingrained," Ontiveros said. "Otherwise, we're just a one-time fad."

For its part, the Chemical Biological Defense Command doesn't wait to get questions from cities it trained but instead initiates follow-up discourse.

"We had the training in October and we have been talking with the [Domestic Preparedness Team] pretty much nonstop since then," Serino said.

Where cities are vulnerable

Serino strongly advocates participation in an ongoing training program. He cites the rash of terrorist attacks on cities worldwide in recent years as reason for "Americans to wake up to the fact they are no longer immune to terrorism."

How vulnerable are American cities to terrorists? The FBI assesses domestic terrorism as a very low threat, Ontiveros said. The ease with which chemical and biological agents can be obtained, disguised, transported and used, however, suggests a huge poten-

tial for terrorist-inflicted mass casualties, he added.

"I don't think we're going to see tanker cars of nerve agent," Ontiveros said. "On the other hand, because these agents are liquid, with the density of water, and highly volatile, very small amounts could do a lot of damage. It's the magnitude of such terrorist strikes that cities fear most."

After getting the initial training, city officials cower at the tremendous coordination they must perform between sometimes hundreds of agencies that would respond to a mass casualty attack. "They haven't experienced this level of coordination before, and it's daunting," Ontiveros said. An attack on a city with a weapon of mass destruction would quickly overwhelm local capabilities, he said. Metropolitan areas often must pool their resources and be ready to aid each other. "They have to have mutual aid agreements in place," he said, "and be ready for those people to come in and augment emergency forces where the attack occurs."

"For about the first six to ten hours, the first responders are the city mem-

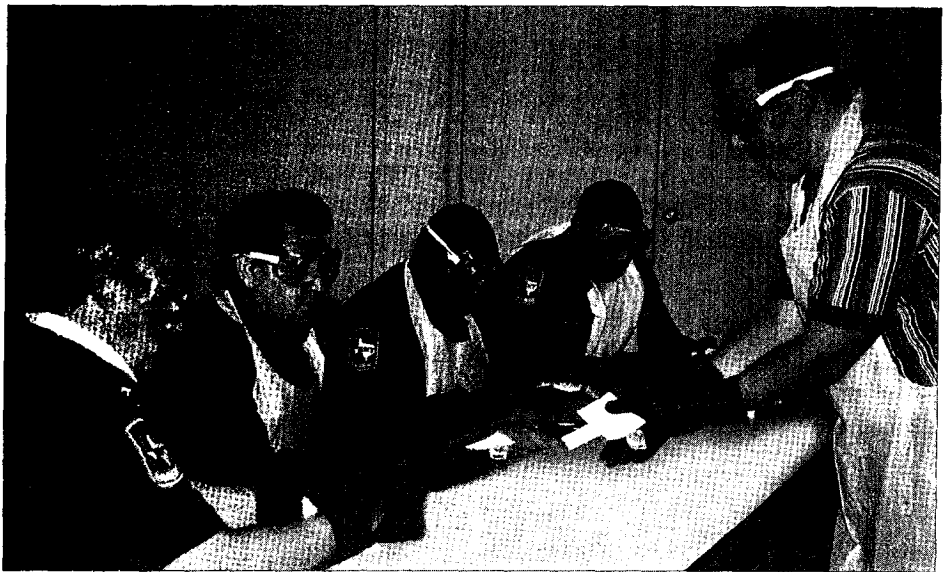
bers, themselves, unless the state can quickly mobilize the National Guard. But the federal response, unless it happens next door to a federal installation, is going to take eight to ten hours to arrive on site." Being prepared ahead of time to deal with a catastrophic attack, Ontiveros said, is the only hope cities have of effectively responding.

"Simply put," Boston's Serino said, "recognizing the potential destructiveness of weapons of mass destruction and how to deal with such attacks will determine how many casualties we avoid in a real incident. This training will enable us to be prepared."

For more information about the Domestic Preparedness Program, contact the Army Chemical Biological Defense Command at (410) 671-4345 or www.cbdc.com.apgea.army.mil. □

Douglas J. Gillert is a freelance writer based in Northern Virginia.

Views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or U.S. government.



Above: San Antonio firefighters learn how to use the M256 chemical detection kit to test for blister, blood and nerve agents.

Surviving Nuclear-Biological-Chemical Terrorism

by Sharon Packer

Radiation, blast, EMP, fire, anthrax, plague — is surviving these terrorist effects possible?

If you're wondering what to do, there's hope. Several economical and practical solutions are available for surviving NBC (nuclear-biological-chemical) terrorism. Here are three:

1. Education. The effects of nuclear weapons can be managed by most Americans if they were to learn basic survival techniques. For example, all adults should know how to estimate radiation levels, read radiation monitoring equipment, and treat for radiation sickness. They should also know how to find expedient sheltering and should possess post-war survival skills. An excellent information source is *Nuclear War Survival Skills* by Cresson H. Kearny. Ask your bookseller for a copy.

Know the symptoms of anthrax, cholera and plague. They're manifested between one and six days after exposure. **But after symptoms appear, only .1 of one percent survive, even when given the best medical attention.** However, an experiment conducted by Dr. Arthur Friedlander, Fort Detrick, Md., shows a **90 percent survival rate when doxycycline was started before symptoms occur and even a day after exposure.** Do not use

penicillin and tetracycline together. (Contact Ralph C. Fenwick at rfenwick@nobleco.net for more information.)

2. Permanent sheltering. Permanent sheltering can be built for about \$250 per person by anyone with instructions and rudimentary metal-working skills. An 8-foot by 50-foot, 40-person shelter can be built for some \$10,000. Step-by-step building instructions are given in our book, *Nuclear Defense Issues*, available for \$25 from Utah Shelter Systems (see address at end of column).

3. Protection from chemical/biological agents. These agents could be spread by way of food, pharmaceuticals, water, aerosols, and contagions. Following are suggestions for defending against these agents:

Before an NBC incident

Store a year's supply of food.

Store water in 55-gallon drums.

Move from high population areas. If possible, live in hills where breezes naturally move down the canyon.

Carry a gas mask and chemical suit in your car.

Store household bleach for decontamination of nerve agents.

Store antibiotics.

Make a safe room in your home that can be pressurized from the inside (as the Israelis do). A positive air pressure

inside will keep all outside air from entering.

Purchase a chemical/biological filter for your shelter or home. Make sure it has been commercially tested. The Swiss-made LUWA filter, reportedly able to filter every known war gas from the air you breathe for up to 40 people, can be purchased from Utah Shelter Systems for \$5,200. It can be run on AC power or can easily be turned by hand.

Take vaccine for anthrax if available. (We know of no source except through the military). **Do not take animal anthrax vaccines**, as has been suggested by a popular but reckless author! They were not meant for human use and will make you very ill. *Check out all suggested preventative measures with a physician.*

During an NBC incident

Keep tuned to an emergency radio station. Chemical attacks, in particular, act quickly.

You may need to stay inside your home for several weeks. Anthrax spores will survive for years. However, re-aerosolization by movement of vehicles or humans is very unlikely.

Wash a chemical victim's skin with household bleach diluted 1:10, or with soap and water. Use plain water when washing the eye area. Wash or spray all contaminated objects with 0.5 percent

bleach. *Food cannot be decontaminated!*

Watch carefully for tampering of packages and lids. Make sure seals are intact.

Eat only sealed foods.

Drink only sealed water.

Drink yesterday's water.

Draw water daily, but don't drink it until the next day. Word of poisoned water spreads quickly.

If and when you go out, keep your car windows closed while traveling.

Avoid air conditioned buildings.

Avoid crowds.

Wear a face mask, poncho, kitchen gloves and boots.

Do not burn human or animal carcasses. The fire will burst the lungs of the carcass and spread the spores. Dispose of them with quick lime.

We hope these suggestions will be of help to you. We'd appreciate any feedback, suggestions or help. Reach us at:

Civil Defense Volunteers of Utah and Utah Shelter Systems

P.O. Box 8171
Midvale, Utah 84047
www.netoriginals.com/uss

Sharon Packer, of Salt Lake City, is the co-founder and president of Civil Defense Volunteers of Utah.

The Prepared Pantry

A column about stocking and enjoying your own in-home grocery store.

This issue: planning a one-year home food supply.

By James T. Stevens

from *Making the Best of Basics* — *Family Preparedness Handbook*

How much food should you store up to feed your family for a year?

The "Family Factor" system outlined in this column will help you figure out how much food (and other supplies) to keep on hand in case disasters cripple local supermarkets and other sources up to a year.

Amounts are based on living exclusively on home supplies for one year — with no meals out. Then, by taking stock of food already in your pantry, you can calculate how much extra to lay up to last a year.

The Family Factor

Figure your Family Factor using these steps (see Sample Family Factor and Your Family Factor charts):

1. Add the number of people in each family category
2. Multiply each total by the Consumption Points for that category.
3. Add the results, then divide by 100 to get the Family Factor.
4. Finally, multiply the Family Factor by the Adult's Annual Supply amounts in the Core Home Food Storage list (see chart) to figure your family's annual amount of that item.

Sample Family Factor Calculation

Family members	# People	X	Points	= Total Points
Male adult	1		100	100
Female adult	1		85	85
Male teenager	2		140	280
Female teenager	1		95	95
Male child	0		95	0
Female child	1		75	75
Infant	1		50	50
Family Total Points				685

Divide total by 100 The sample Family Factor is 6.85.

Your Family Factor Calculation

Family members	# People	X	Points	= Total Points
Male adult			100	
Female adult			85	
Male teenager			140	
Female teenager			95	
Male child			95	
Female child			75	
Infant			50	
Family Total Points				

Divide total by 100 Your Family Factor is _____.

To derive the most benefit from the Family Factor, blend in your personal experience and knowledge of your family's consumption habits, and, if necessary, adjust the consumption points. Our figures are based on a male adult's average rate.

The Family Factor Formula is roughly based on a collection of federal data (U.S. Department of Agriculture, U.S. Required Daily Allowance, etc.) which establishes average yearly consumption levels of most foods for the average adult male.

Core Home Food Storage

Quantities Rounded to Nearest Five Pounds, Except Where Noted
 Multiply Adult Quantity by your Family Factor to Determine Your Family Total

Storage Item	Shelf Life (months)	Adult Quantity	Family Factor	Family Total	On Hand	Needs
Water — Emergency Supplies & Treatment						
water, potable	6-12	14 gal.	Per person			
water, 4 or 6 oz. aseptic pack	indefinite	2 gal.	Per person			
portable treatment unit	indefinite	1	1 unit			
bleach, 5.25% hypochlorite	6	1 gal.				
tablets, water treatment	36-60	1 pkg.				
Wheat, Other Whole Grains, Beans & Lentils						
wheat, white, hard red winter	indefinite	15 lb.				
wheat, white, soft red winter	indefinite	15 lb.				
wheat, white, hard red spring	indefinite	15 lb.				
wheat, white, soft red spring	indefinite	15 lb.				
wheat, white, durum	indefinite	15 lb.				
wheat, white, soft red winter	indefinite	15 lb.				
wheat, white, soft red spring	indefinite	15 lb.				
wheat, white, hard red winter	indefinite	15 lb.				
wheat, white, hard red spring	indefinite	15 lb.				
wheat, white, durum	indefinite	15 lb.				
beans, dried	indefinite	10 lb.				
lentils, dried	indefinite	10 lb.				
Powdered Milk, Dairy Products & Eggs						
milk, non-instant powdered	24-48	100 lb.				
butter, dehydrated	60-96	20 lb.				
cheese, dehydrated	60-96	25 lb.				
eggs, dehydrated / freeze-dried	60-96	25 dz.				
evaporated milk	24-36	12 cans				
Cooking Catalysts — Salt, Oils & Leaveners						
iodized salt	indefinite	5 lb.				
yeast, cake, moist	pkg. Date	4 oz.				
yeast, active dry powdered	12-24	12 oz.				
vegetable oil, liquid	12-24	10 gal.				
Meats & Seafood						
beef, ground	6-12	5				
chicken, whole	6-12	10				
fish, frozen	6-12	10				
Kitchen Staples — Condiments & Seasonings						
peanut butter	12-24	15				
pepper, black	indefinite	8 oz.				
Meats & Seafood						
beef, ground	6-12	5				

This form may be copied for personal use only.

Tacda Letter

For members of
The American Civil Defense Association
Winter 1997-98

Do you feel secure about the future?

Most people I talk with are concerned about the days ahead, but in general, plan as if life and society will continue to be reasonably stable and secure.

Some of my friends have grave concerns over proliferation, terrorism, world economic crises, the rising debt burden in the United States, weather trends, volcanoes, earthquakes, etc., but most of their concerns seem to have no effect on their plans.

How about you? Do your concerns translate into reasonable plans and actions? If you ask what you can do, here are a few suggestions:

- **Be informed.** You can't take reasonable actions if you have no idea what the real problems are.
- **Support those who are trying to help bring factual and pertinent information before the public** (for example, organizations like Tacda and even Congress when it heads in the right direction).
- **Personally prepare** for reasonable threats to the area where you live and work. One common starting point for being prepared is to purchase extra food and long-term storage items in case our national infrastructure is temporarily disrupted by a natural or manmade disaster.

Separately, check out Tacda's new logo. It appears in the box at right. Though new, the compass design alludes to Tacda's original but ever-vital mission: **helping chart America's civil defense future.**

And as you may have noticed, we now use upper and lower case letters when writing our initials: **Tacda**. We think it looks **friendlier**. And being member-friendly has been part of our mission from the start as well.

We hope you like the changes!

The Tacda Staff

How to contact Tacda

Tacda — The American Civil Defense Association — urges government and citizens alike to maintain sensible precautions for disasters, natural and manmade.

Visit our web sites for articles from the quarterly *Journal of Civil Defense* and special offers for Tacda members from the Tacda Store (see centerfold). Surf to:

Tacda web site:
www.tacda.org

Journal web site:
www.tacda.org/journal/

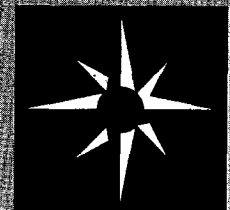
Tacda Store:
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membership.html](http://www.tacda.org/forms/membership.html)

Mettag Products:
www.mettag.com

We want to hear from you! Contact
us at

Tacda
PO Box 910
Starke, Fla. 32091
defense@tacda.org
(800) 425-5397
(904) 964-9641 (fax)



Tacda

The Journal of Civil Defense does not take responsibility for the accuracy of the following information. Any or all of the information is subject to change without notice.

1998

March 30-April 3

Community Emergency Risk Management Workshop, Mt. Macedon, Australia. Sponsors: Australian Emergency Management Institute (AEMI). Contact AEMI, Mt. Macedon, Victoria 3441, Australia; tel: 61-3-54-215 100; fax: 61-3-54-215 273; e-mail: aemi@ema.gov.au; WWW: <http://www.ema.gov.au>.

April 4

Conference on Current Earthquake Engineering Research in the Central United States (CEERICUS '98), Urbana, Ill. Sponsor: Earthquake Engineering Research Institute (EERI) Student Chapter at the University of Illinois. Contact: Mr. Pat Arnett, 3139 Newmark Lab, 205 North Matthews, Urbana Ill. 61801; fax: (217) 333-9264; e-mail: jarnett@uiuc.edu.

April 5-9

14th International Meeting on Prevention, Preparedness, and Response to Hazardous Material Spills: "Risk Management: Closing the Loop," Chicago. Sponsor: U.S. Environmental Protection Agency. Contact: <http://www.nrt.org/nrt/hazmat98.nsf>, or <http://www.epa.gov/ceppo/pubs/postcard.html>; e-mail: hazmat98@icfkaiser.com.

April 5-9

Fourth International Symposium on Hydrologic Applications of Weather Radar, San Diego. Sponsor: American Geophysical Union and others. Contact: Dr. Konstantine P. Georgakakos, Hydrologic Research Center, 12780 High Bluff Drive, Suite 250, San Diego, Calif. 92130; attn: Ms. Corinne Rice; (619) 794-2726; fax: (619) 792-2519; e-mail: admin@hrc.ucsd.edu; WWW: <http://hrc.ucsd.edu> or <http://www.ihr.uiowa.edu/meetings>.

April 6-7

Third Harvard Symposium on Complex Humanitarian Disasters: "Disaster Medical Response: Current Challenges and Strategies," Boston. Contact: Harvard Medical School; (617) 432-1525; e-mail: hmscme@warren.med.harvard.edu.

April 6-10

20th Annual National Hurricane Conference, Norfolk, Va. Sponsors: Florida Shore and Beach Preservation Association and many others. Contact: Florida Shore and Beach Preservation Association, 2952 Wellington Circle, Tallahassee, Fla. 32308; (850) 906-9224; fax: (850) 906-9228; WWW: <http://www.netally.com/nhc>.

April 15

Effective Disaster Recovery Techniques - American Public Works Association (APWA) Video Conference, Kansas City, Mo. Contact: APWA, 2345 Grand Boulevard, Suite #500, Kansas City, Mo. 64108-2625; (816) 472-6100, ext. 3511; fax: (816) 472-1610; WWW: <http://www.pubworks.org>.

April 19-22

North American Snow Conference, Edmonton, Alberta, Canada. Sponsors: American Public Works Association (APWA) and others. Contact: APWA, PO Box 27-296, Kansas City, Mo. 64180-0296; (816) 472-6100; e-mail: snow@mail.pubworks.org.

April 19-23

First Federal Interagency Hydrologic Modeling Conference, Las Vegas. Contact: Don Frevert or Jim Thomas: (303) 236-0123, ext.235; fax: (303) 236-0199; e-mail: dfrevert@do.usbr.gov., or jthomas@do.usbr.gov.

April 20-22

International Workshop on Nonstructural Flood Control in Urban Areas, Sao Paulo, Brazil. Sponsor: United Nations Educational, Scientific, and Cultural Organization (UNESCO), International Hydrological Program. Contact: International Workshop on Nonstructural Flood Control in Urban Areas, Av. Brigadeiro Luis Antonio, 317-cj. 33, 01317-901 Sao Paulo, SP/Brazil; tel: (+55) (11) 604-6412; fax: (+55) (11) 604-3406; e-mail: urban_floods@edu.usp.br.

April 20-24

European Geophysical Society (EGS) 23rd General Assembly, Nice, France. Contacts: For "Landslide Hazards in Seismically Active Regions," contact Janusz Wasowski, CNR-CERIST (Italian National Research Council), c/o Istituto Geologia Applicata e Geotecnica, Politecnico di Bari, via Orabona, 4-70125 Bari, Italy; tel: +39-80-5428111; fax: +39-80-5567944; e-mail: wasowski@area.ba.cnr.it; WWW: <http://www.copernicus.org/EGS/egsga/nh3-5.htm>. For "Scaling, Multifractals, and Natural/Man-Made Hazards," contact Burce D. Malamud, Department of Geological Sciences; Cornell University, Snee Hall, Ithaca, N.Y. 14853-1504; (607) 255-3432; fax: (607) 254-4780; e-mail: malamud@geology.cornell.edu; WWW: <http://www.multifractal.jussieu.fr>. For "Geomorphological Hazards: Extent, Evaluation, and Mapping Techniques," see WWW: <http://www.gndci.pg.cnr.it/wwwgndci/Events/EGS98/Forum.html>. For "Shallow Landslides and Rainfall Triggering," contact Marino Sorriso-Valvo; e-mail: sorriso@irpi.cs.cnr.it. For general information about the assembly, see <http://www.copernicus.org/EGS/EGS/html>.

April 21-24

13th Annual Conference on Emergency Management Technology, Virginia Beach, Va. Sponsor: State and Local Emergency Management Data Users Group (SALEMDUG). Contact: Dave Miller, SALEMDUG President, Iowa Emergency Management Division; (515) 281-3231; e-mail: dmiller@max.state.ia.us. - or - Mark Pennington, Conference Coordinator, Virginia Department of Emergency Services; (804) 674-2432; e-mail: mpennington.des@state.va.us; WWW: <http://www.salemdug.dis.anl.gov>.

April 27-28

Modern Prediction and Response Systems for Earthquake, Tsunami and Volcanic Hazards, Santiago, Chile. Sponsors: International Association of Seismology and Physics of the Earth's Interior (IASPEI) and the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI); Contact: Bruce A. Bolt, Department of Geology and Geophysics, University of California, Berkeley, Calif. 94720; fax: (510) 845-4816; e-mail: boltuc@socrates.berkeley.edu; or J. Gutierrez, Instituto Geografica Militar, Santiago, Chile; fax: 56-2-698-8278; e-mail: igm@reuna.cl.

April 29-10

Survive! Business Continuity Group 7th Annual Pacific Conference and Exhibition, Sydney, Australia. Contact: Survive! Australasia, 2 Frederick Street, Doncaster, Victoria 3108, Australia; tel: +61 3-9840 7330; fax: +61 3-9840 7331.

May 3-8

Watershed Management: Moving from Theory to Implementation, Denver. Sponsor: Water Environment Federation (WEF). Contact: WEF, 601 Wythe Street, Alexandria, Va. 22314; 1-800-666-0206 or (703) 684-2400; e-mail: confinfo@wef.org.

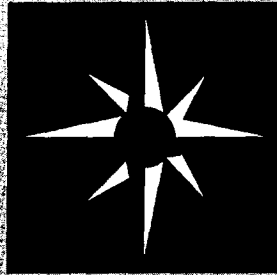
May 4-8

Fire Information for the 21st Century, Melbourne, Australia. Sponsors: International Network for Fire Information and Reference Exchange (InFire), and others. Contact: Nina McPherson, Metropolitan Fire Brigade Training Complex Library 619 Victoria Street, Abbotsford, VIC 3067, Australia; tel: +61 3 9420 3820; fax: +61 3 9420 3857; e-mail: nmcpcrs@mfb.vic.gov.au.

May 11-15

Summer School — The Emergency and Disaster Aspects of International Health, Sheffield, U.K. Sponsor: the School of Health and Related Research, University of Sheffield, U.K. Contact: Deborah Owen, tel: +44 114 222 0720; fax: +44 114 272 4095; e-mail: d.owen@sheffield.ac.uk or <http://www.shef.ac.uk/~scharr/flyer.html>.

New compass, same directions.



Tacda

The American Civil Defense Association

**Join Tacda — and help promote sensible precautions to disasters.
Our compass logo may be new, but our services are as vital — and user-friendly — as ever.**

An annual membership includes a year's subscription to the *Journal of Civil Defense* and the every-other-month newsletter, *Tacda Alert*, plus discounts on purchases at the Tacda Store (see centerfold).

Annual individual membership rate: \$25; annual organization membership rate: \$100.

An annual subscription to the *Journal of Civil Defense* (without Tacda membership) costs \$18 (non-U.S. rate higher).

Sign up by contacting Tacda, P.O. Box 1057, Starke, Fla. 32091

Or call (800) 425-5397 or surf to www.tacda.org

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