

Survivable neighborhoods, by Sharon Packer

James T. Stevens: **How to keep home disaster preparedness
from turning into, well, a disaster.**

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LIVING Storms and Other Hazards along the California Coast ON THE EDGE

by Vickie M. Graham

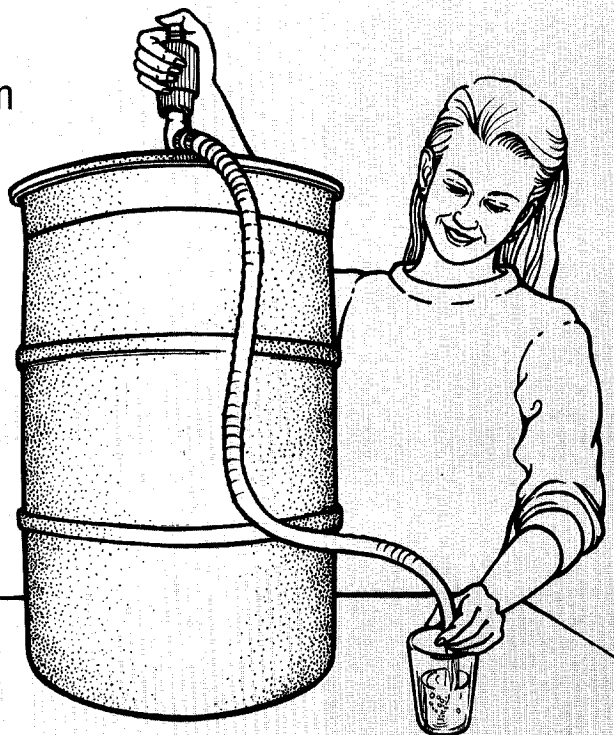
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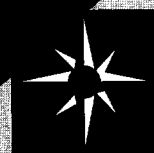
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To our readers...

It's one thing to *talk* about emergency preparedness; it's another actually to *make* the preparations; and it's something else again to *rely* on the them — *regularly*.

But such is what happens in some communities along California's Pacific coast, writes **Vickie M. Graham**. The folks there have tips for anyone routinely in the destructive path of nature. See page 4.

Regular *Journal* contributor **Sharon Packer** explains how entire neighborhoods (the bigger the better, she says) can survive disasters by developing a neighborhood emergency plan. Packer shows how to go about it by the numbers, starting on page 12.

The last thing you want is to have a bitter taste in your mouth after making all those disaster preparations. "Prepared Pantry" columnist **James T. Stevens** says proper storage of food can save you and your family from upset nerves and stomachs if you ever have to eat the bagged, canned and bottled vittles during an emergency. Start reading all about it on page 14.

One likely emergency has nothing to do with nature, terrorism or war, writes **Kevin G. Briggs** in this issue's "Washington Perspective." It's the so-called "Y2K" problem, the confusion that will result when the internal calendars of many computers fail to log in the new century. Read about it on page 2 and in the "Tacda Letter" on page 16.

The Tacda staff

inside

Folks living along California's Highway 1 are known for

Living on the Edge

by Vickie M. Graham, page 4

Neighborhoods that last...

...plan and organize for emergencies.

Sharon Packer shows how to do it.
page 12

Avoiding emergency chow that's a cause for emergency

James T. Stevens says it's all in how you store the food.
page 14

Washington Perspective, page 2

Tacda Catalog, page 8

Tacda Letter to Members, page 16

Upcoming Events, inside back cover

The *Journal of Civil Defense* is the official quarterly of The American Civil Defense Association (Tacda), P.O. Box 1057, 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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Washington Perspective

by Kevin Briggs • • • • •

The Y2K Waves and Your Future

86 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 19

Are you concerned about the Y2K (or "Year 2000") problem? If not, I strongly suggest you should be. Forecasts of what the U.S. government alone may spend to fix its internal problems are in the \$5-10 billion range. Imagine what price the private sector will pay!

Yet most people I talk with about Y2K either don't know much about the problem or believe it will be nothing more than a ripple in the ocean of life. While I hope these people are correct, my concern is that these oceanic ripples will turn into a series of tidal waves. Tidal waves often look like gentle swells while far out at sea. In general, they do not reveal their devastating size until they approach land. The truth is that Y2K is such a complex, global problem, no one can adequately predict the size of the waves. In a sense, we are all currently standing on the economic shoreline waiting for the waves. The question is: Should you prepare for a possible large wave or not?

What is the Y2K problem? It is threefold in nature. First, millions of computers used in businesses and governments worldwide may malfunction because they don't properly understand dates beyond 1999 (some computers will think 2000 is actually 1900, others 1980, etc.). Even many relatively new computers (like some Pentiums) and operating systems like Windows 95 may be affected.

Second, it is a global infrastructure problem because the entire industrialized world rides in a series of "ships" tied together by unbreakable, interconnected chains. Imagine the effect of a tidal wave dunking a ship called the "USS Powergrid" while other ships (with banking and governmental names) try to stay afloat. Our U.S. ships are also tied to other nation's ships and may be seriously pulled down-

ward if an Asian or European ship begins to sink. An April 13, 1998, *USA Today* article noted, for example, that only 8 percent of German companies have a formal program to prepare for the Y2K problem compared to 80 percent of large U.S. companies.

Third, it is a problem that has a large and uncontrolled variable called the "trust factor." One may remember that the stock market crash of 1929 was largely driven by people who lost trust in their "virtual" or "paper" money-based organizations. While many financial brakes have been instituted since then to prevent "panic" selling of stocks or withdrawal of "electronic" assets, these brakes may not prove sufficient to keep us from getting pulled out to sea by a riptide induced by fear-enlarged waves.

What should one do about this potentially huge problem? First, don't panic. We still have some time as citizens to address the issues soberly.

Second, determine how much risk you are willing to live with. If you are like me and many of my friends who have studied this problem, you will take some additional preparedness measures.

Third, I recommend you act soon. This problem may escalate well before Jan. 1, 2000. I believe that if you take reasonable precautions now, you will dampen the effect of the waves throughout our society later. For more Y2K ideas, see the Tacda letter on page 16 for practical suggestions on how to prepare for the Y2K wave. □

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.

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*In the aftermath of
El Niño storms, some
California residents
are literally...*

LIVING Storms and Other Hazards along the California Coast ON THE EDGE

Story and photos by Vickie M. Graham

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After receiving more than twice their annual rainfall in three months, which caused mud slides and closed roads along the Golden State's scenic Highway 1, Californians thought the worst was over. They were wrong.

"I was jolted awaked by a large, popping sound, almost like a balloon exploding," said a dazed Paul Gunther, after his \$600,000 dream house slipped off its hillside foundation in Laguna Beach March 8. "When I walked around the house to investigate, the whole structure was creaking and popping. I woke up my wife, we grabbed the kids and ran."

Within 45 minutes, his 3,600-square-foot, five-bedroom home — with its million-dollar view of the Pacific Ocean — lay in ruins at the bottom of the canyon below. "I didn't even have time to grab shoes," he said. Neighbors offered shelter and assistance to the Gunthers and their children, a 2-year-old daughter and a 1-year-old son, after

the family's predawn dash to safety.

Despite his harrowing experience, Gunther, a three-year resident of the posh community just south of Los Angeles, is determined to stay. Standing on the lot where his house once stood, he gazed into the canyon and said, "I've got a strong support system of family and friends. I'm planning to rebuild — right here."

Some of his Laguna Beach neighbors aren't so sure. Two were killed and dozens injured when mud slides made slopes unstable earlier in the year. More than 300 homes in Orange County have been damaged or destroyed. Among them were two luxury homes in adjacent Laguna Niguel, which slid down a hillside March 20 crushing nine condominiums below.

"They weren't demolished, but it's unlikely they can be saved," said Tim Casey, Laguna Niguel's city manager. "Some of the condo's residents spent frantic hours before the slide scurrying to salvage property, some throwing bags of clothes and other household items out windows to save time."

Similar scenes occurred throughout early April along the California coast from San Francisco to San Diego, all the result of El Niño-related storms.

Driving along California's oceanside Highway 1, it looked as though a new landscaping trend had stormed the state. Massive hillsides draped in huge squares of blue and black plastic to prevent further erosion of the already super-soaked soil complemented hundreds of thousands of sandbags, placed

strategically to coax rushing water away from homes, businesses, roads and other likely-to-flood areas.

Damage estimates this year in California alone will likely top \$500 million, according to state disaster officials. And that's not counting lost tourism revenue. Although state tourism officials are reluctant to offer figures, motel and package tours to California resort areas like Santa Cruz, Monterey and Carmel are down 40 percent from last year, according to local business owners.

Those who make their living from the sea are having a tough year financially, too. El Niño is responsible for warmer water temperatures, which drive fish into colder waters to the north. Sea lions and seals are starving for lack of fish as well. The Santa Barbara Wildlife Refuge reports seal pup deaths at 70 percent this year, compared to about 30 percent last year.

'Ocean Hubble'

Still, it could be worse. National Weather Service officials spotted the first signs of El Niño last July when warmer-than-normal water temperatures popped up on satellite photos. Their observations were confirmed by a series of buoys anchored across the Pacific ocean, the result of a 10-year, \$272 million project of the National Oceanic and Atmospheric Administration to track El Niño events. The buoys trail sensors underwater — much like jellyfish tendrils — to watch for signs of increased water temperatures.

"It's the oceanographers' equivalent of the Hubble telescope," said Mike McPhaden, an NOAA oceanographer. "The buoys allow us to observe the inner working of the ocean's atmospheric

system with the immediacy and clarity we've never had before."

What they saw startled government officials. A mass of water one-and-a-half times larger than the United States with an above-average temperature of about 85 degrees F was headed east across the Pacific. Officials from vice president Al Gore to local forecasters in California met in late September in Los Angeles for a weather summit to discuss preventive measures and disaster preparation. Soon, El Niño was a household word across the nation with many calling it El Nonsense or El No-Show, the result of media overload.

But David Carmany, who became Pacifica city manager nearly two years ago, wasn't taking anything for granted. As the former city manager of Malibu, he'd been through the horrendous '93 forest fires there and is a proponent of the Boy Scout mantra "Be prepared." He knew firsthand what El Niño storms had done in the Los Angeles area in 1982 and '83. So while most jokes on the Internet last fall dealt with

El Niño, Carmany and his city staff exercised their emergency operations center and disaster plan.

'Trusty relationships'

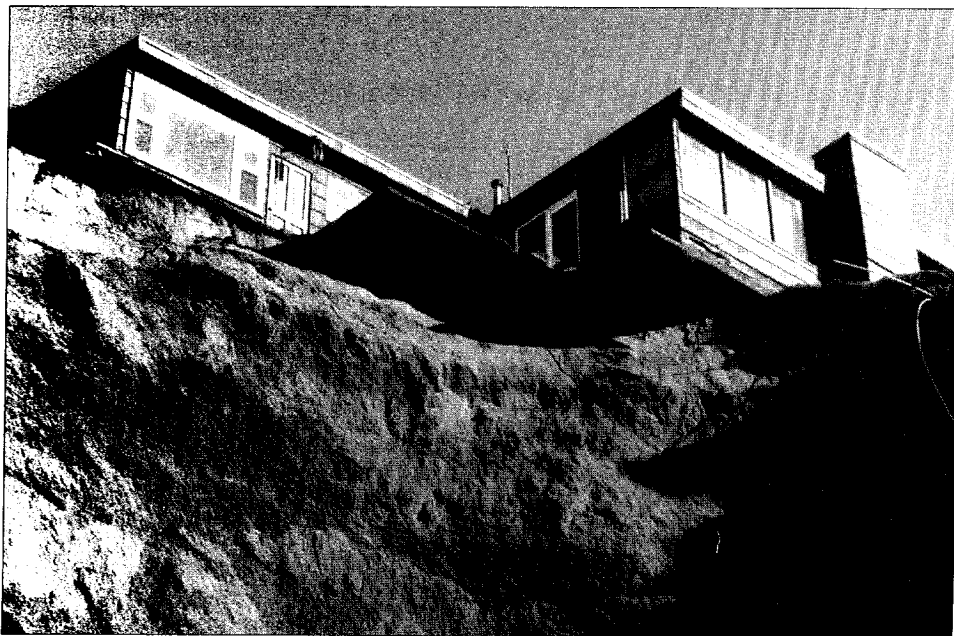
"We didn't want to be introducing ourselves for the first time to a lot of the agencies we knew we'd be working with once the storms hit," Carmany said. "It proved worthwhile to establish a trusty, working relationship, not only between police, fire and public works crews, but to outside disaster relief agencies as well."

Part of the preparation involved cleaning all the storm drain systems and creek beds, which was already funded in the city's budget. Every publicly owned facility was also cleaned at least once before the rains came.

Carmany also sent letters to owners of private drainage facilities urging them to clear their systems of debris

continued on page 6

Below: Six weeks of nonstop El Nino rains left this house in Pacifica, Calif., teetering on the edge as storms eroded more than 25 feet of terrain.





continued from page 5

before the storms began. "Some people did, and some people didn't," he said. "And those who didn't are paying the price."

Police Capt. Mike Blagrove, who also is the emergency coordinator, talked to civic groups — anyone who would listen — and published articles in the local paper about what to do and who to contact in case of emergency. (See box, "Before the Storm," page 13) Officials from the U.S. Geological Survey, the California Office of Emergency Services and the National Weather Service conducted training for city council and staffers, who by law become disaster workers during emergencies.

'Priceless knowledge'

"We got great assistance from other agencies, especially the U.S. Geological Survey's Ken Lajoie," Carmany said. "Along with people from the National Weather Service, he conducted a special meeting about what El Niño is and what we could expect with respect to beach erosion and cliff retreat. It was almost as if he was looking into a crystal ball. The guy was amazing. And the knowledge he has of this coastal section was priceless to us."

The local cable channel taped the session and played it continuously for the nearly 40,000 residents of Pacifica, nestled between the ocean and the steep hills of south San Francisco

Left: In Laguna Beach, Calif., heavy El Niño rains caused numerous mudslides, which carried this modular building nearly 100 feet down the hillside.

about five miles due west of the international airport.

Good thing.

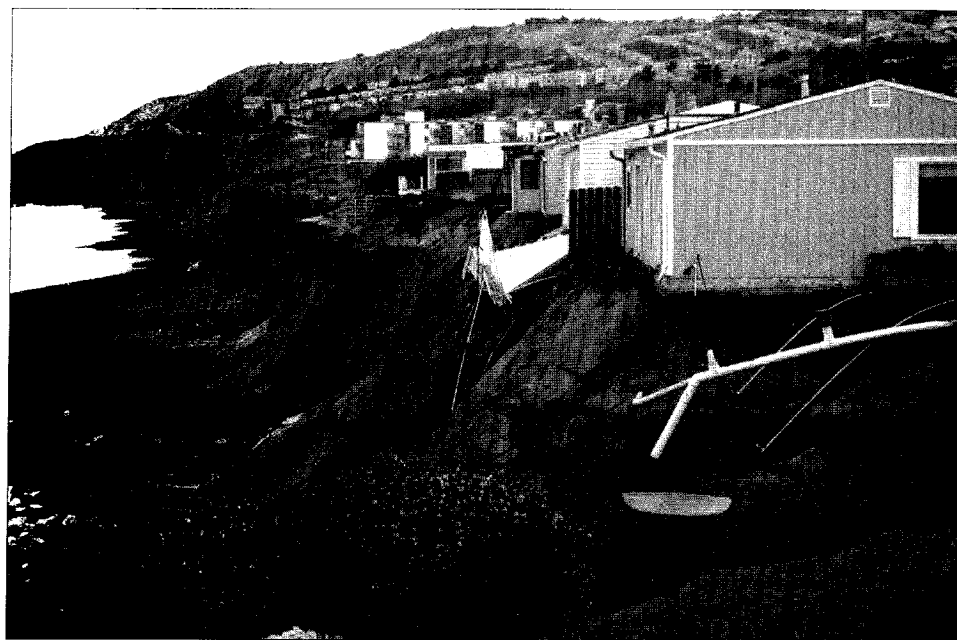
El Niño struck with a vengeance beginning in November. "We had six weeks of nonstop water," Carmany said. "We've already had more than twice as much rain as our annual rainfall average and will likely get more before the end of spring."

Hardest hit along the city's 6.5-mile coastline were 12 houses with unobstructed views of the ocean. Built on Esplanade Avenue in the late '40s and early '50s, most of the then-100-foot-deep lots boasted modest, two-bedroom houses fronting the ocean.

"From 1853 to 1946 there was no erosion of that area at all," geologist Lajoie told the *Journal of Civil Defense*. "Then, in late '46, about 20 feet eroded, according to our historical data. You'll hear some people say that cliff erodes about 12 to 18 inches a year, but it doesn't happen that way. That's just an average over time. You may not have erosion for 20 years and in the 21st year, guess what? Another 20 or so feet disappears."

A geologist for 28 years and an expert on coast erosion for San Mateo County, he first took pictures of the cliffs in 1971. "I noticed how soft the earth was in that area and told myself I'd better keep an eye on it. But even the heavy El Niño storms of '82-'83 didn't affect the area much," Lajoie said. "I kept track of that area of coastline over the years and published the data I'd collected, so when this year's storms were predicted, I dug out my old field notes and photos to see what we might expect."

According to Blagrove, Lajoie was right on target. "He took a few city employees on what he called a walk-about



a couple weeks after his meeting with the council," Blagrove said. "We walked up and down the coast, and he'd point to a particular area and say, 'That's gonna go, and that's gonna go and here's why.' While he wasn't 100 percent correct, he was kinda like that old Ivory soap commercial — 99 and 44 100ths percent accurate."

As press time, the 12 houses — which were "red-tagged" as uninhabitable by the city when the area became unsafe — were dangling over the edge of a 75-foot-high cliff and in danger of collapsing onto the rocky beach below.

Gravity, slowly

According to Lajoie, following the heavy storms, gravity naturally carries water from the saturated earth in the hills above the cliffs toward the ocean. It happens slowly, so that when the water leaches through the cliffside, days or weeks may have passed, and homeowners may think the danger is passed.

Which is exactly what happened in Pacifica after 2.5 inches of rain fell in

Above: Patios, decks and hot tubs — staples of California living — took a dive when El Niño storms surfaced in Pacifica earlier this year. Twelve homes were declared uninhabitable by city officials.

less than five hours on Feb. 2. It wasn't until Feb. 22 when the cliff started coming apart.

The houses' concrete foundations rest atop 10 feet of modern dune sand. Under that is 65 feet of soft earth, the perfect combination for cliff retreat. Add to that waves from the ocean eroding the beach at the cliff's base, and zap! Within one week, 25 to 30 feet of homeowners' backyards — all that remained between their homes and the water — disappeared into the ocean.

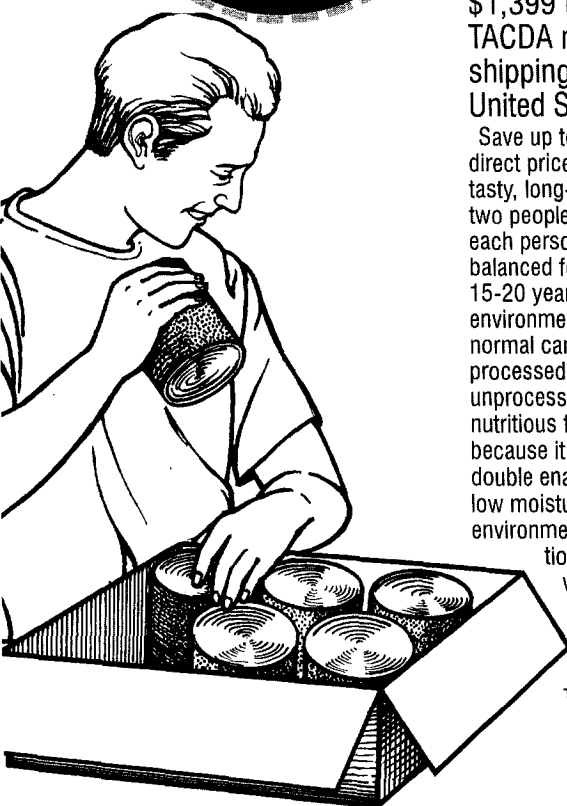
"When I bought my house in 1984 after El Niño, I knew it was a risky venture," said a philosophical Joe Parker, whose house teeters on the edge of destruction. "I knew it was a risky venture. I don't blame anyone. It was my money and my house."

"The biggest investment of our life was this home," said Dave Topaz, one of El Niño's victims and a neighbor of

continued on page 10

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Recommended water storage: 55 gallons.

Offer 3

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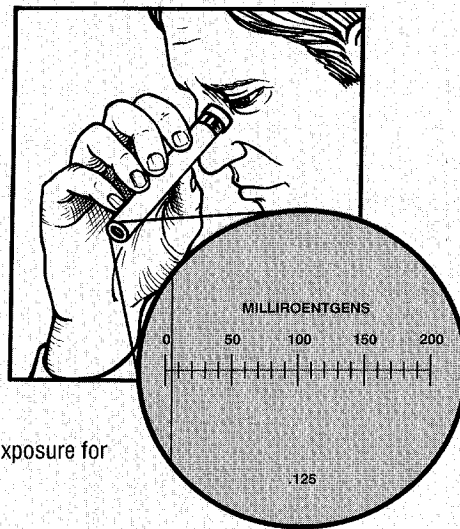
perform this recharging for free for the life of the instrument (other than

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

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Left: Heavy-duty plastic sheeting drapes the hillsides along the cliffs of Laguna Beach to protect saturated ground from further erosion and possible mudslides.

continued from page 7

Parker. "We bought it in the '80s — you know — four bedrooms, two baths, tremendous views." And it's true, the view out his sliding glass door off the kitchen is breathtaking. Just don't look down. The deck and hot tub are now owned by the ocean, and Topaz and his family are camping out in two recreational vehicles parked in front of his house courtesy of the American Red Cross.

'A third will walk away'

The organization gets glowing remarks from city manager Carmany. "In terms of outside emergency assistance, there's nobody better than the American Red Cross," he said. "They were here first and with the most stuff. They fully participated in our disaster exercise and put people who lost their

houses in local motels for up to three weeks. In some cases, they provided mobile homes for them to use free of charge."

Of the 28 homes declared unsafe for living in Pacifica at press time, Carmany believes about a third will walk away from their investment, while the rest will stay and try to rebuild. The city has received a onetime \$1.52 million grant from the Federal Emergency Management Agency to build a rock revetment to protect the city's street and utilities. "Although public funds can't be used to protect private property by law, a not unintended secondary benefit will be the salvaging of the lots, although the houses will most likely be torn down," he said.

For those who wish to rebuild, the city is considering giving up half of the 64-foot-wide right-of-way on Esplanade Avenue and possibly making it a one-way street with parking.

Homeowners would then rebuild closer to the road to retain as much land as possible behind the new homes.

"Some people bought houses there as recently as '94," said Sarah Albee, code enforcement officer for the city. "They don't have much equity, but knew the risk because it was well documented. However, anyone rebuilding will have to make major code upgrades to meet our modern standards. And they'll need to hire a geologist to get a geo-technical report that will satisfy the city engineers before they can rebuild. The city's ordinances and zoning plans are sufficient, so we don't anticipate making any changes in those areas. The key is getting the rock revetment in place."

In the long run, however, Lajoie fears rebuilding is a lost cause. "When people built along what is now Esplanade Avenue — long before the city was incorporated — no one anticipated anything like this happening. Who knew? But we know now. You simply can't fight nature," he said.

Whatever remedies are used to hold back the sea — and until zoning laws are changed to prevent building in such areas — it seems people will always seek the perfect view and pay for it, whatever the emotional or physical cost.

Such is the price for living on the edge. □

Vickie M. Graham is a freelance writer based in San Antonio.

Before the Storm

If someone knocked on your door and said you had only 15 minutes to evacuate your house or apartment, what would you take? And where would you seek shelter?

Those are the questions Pacifica police Capt. Mike Blagrove poses to those who attend his disaster preparedness sessions. The answers he's received are real eye-openers. After all, when will that ever happen in your life? Why bother?

"Because your life and the lives of your family members may depend on it," Blagrove said. "Most men reply they'd take their golf clubs, sport trophies, cigars and video camera. Most women say they'd take their wedding photos and picture albums. It may sound funny, but actually, for the most part, those answers are right. Take what you can't replace."

When an emergency arises, he advises citizens that, unlike neighboring San Francisco, Pacifica has only about 170 employees, and they'll concentrate on the most serious situations first. "Services probably will be stretched to the maximum, so we won't be able to respond immediately," he said. "People can help themselves a lot if they'd just plan what to do before disaster strikes." His advice:

What to look for

- Muddy water or excessive water.
- Plants, sticks, etc., are not where they were yesterday.
- Unusual noises (house creaking).
- Cracks in floor, walls or ceiling.

What to do

- Know where fire exits are.
- Determine a place for your family to meet in case you're separated.
- Know your options for leaving the area. What routes can you take?

- Keep important documents in a safe deposit box or flameproof and watertight security box.
- Don't forget to plan for pets.
- Know where protective shelters are located and how to get there.

Home emergency supplies

- Keep flashlights and a portable radio in an easily accessible area.
- Stock a first aid kit with adequate supplies for your entire family.
- Maintain a three-day supply of nonperishable food. Try to use foods that need no refrigeration, preparation or cooking and require very little water. Don't forget a *nonelectric* can opener! And don't forget food, water and medicine for pets.
- Vitamins and medications such as aspirin or non-aspirin pain relievers; anti-diarrhea medicine; antacids, laxatives; and syrup of ipecac or activated charcoal (in case of poisoning).
- Water — at least one gallon per day per person. Don't store water in containers that can decompose or break, such as milk cartons or glass. If you're unsure of the water's cleanliness, boil it. Keep water in a dark place. Light is water's enemy.
- Special items for infants, the elderly, disabled or people with special medical needs.
- Sanitary items such as toilet paper, towelettes, soap, liquid detergent, feminine supplies, personal hygiene items, disinfectant, household bleach and plastic garbage bags, which can be used as portable toilets.

Right: Fearing this uninhabitable house in Pacifica would be ripped from its foundation and crash into the ocean, fire officials cut through its main support beams in an effort to salvage as much as possible.

- Tools and building supplies. As a minimum, have pliers, crescent wrench, hammer and tape handy. Make sure you can turn off your gas, water and electricity. (Note: Do NOT turn the gas back on. Leave that to the utility experts!)
- Miscellaneous items such as cash or travelers checks in small denominations, a fire extinguisher (ABC type), tent, compass, matches in a waterproof container, paper and pencil.

Vehicles

- Keep the gas tank as least half full at all times.
- Keep an emergency kit in your car.

Finally, Carmany says anyone living in an earthquake-prone area like California who doesn't have their water heater strapped down is "living in denial. And a friend of mine keeps a pair of shoes by his bed and at every door," he added. "In case he needs to evacuate quickly, his feet will be protected from broken glass, which poses a hazard in most disasters."

— Vickie M. Graham



Organizing a Neighborhood Emergency Plan

In a widespread emergency, prompt state or federal assistance might not be available to the many people needing help.

What could you — and your neighbors — do?

By Sharon Packer

Churches and communities in many areas of the country have designed and used this and similar plans to organize neighborhoods into 'self help' units. This is a great tool for making your community a better, safer place to live.

The following goals were considered:

1. Rescue people whose lives are threatened.
2. Provide first aid.
3. Account for the condition and location of all neighbors.
4. Provide emergency water, food, clothing, and housing.
5. Restore normal living conditions as quickly as possible.
6. Prevent or limit property damage.
7. Fortify social, emotional, and spiritual strength.
8. Be able to report to civil authorities the following information:
 - Your name and how you can be reached.
 - Description, location, and magnitude of the emergency.
 - Names of any injured, missing or dead, their next of kin, and how they can be located.
 - Location and extent of property damage.
 - Number of persons needed to provide assistance and specific tasks to be done.
 - Number of people who need medical help.
 - Actions being taken to help those in distress.
 - Number of members available to provide

assistance, including those with specific skills.

- Assistance needed that is unavailable in the unit affected, including medicine, food, water, clothing, shelter, or fuel.

Getting started

Invite 10 to 12 neighborhood families to a meeting and introduce the concept. Vote for a neighborhood unit leader and secretary.

The following business should be done at the initial meeting:

Make a list of the possible emergencies the unit might face. Don't exclude the possibility of earthquake or war.

Make a list of the resources of that unit that could be utilized. Include tractors, trucks, four-wheel drive vehicles and those people capable of driving them. List people trained in first aid, civil defense, search and rescue, construction, and any other skills that might need to be used in an emergency. If possible, check basements for possible use as fallout shelters. Encourage neighbors to consolidate their resources.

If possible, make a list of each family's blood types, special medical needs, next of kin, personal physician, place of work, and a friend or family member out of state that could be reached in an emergency. Have the chairman or secretary keep this list in a safe place such as in a labeled vile in his or her refrigerator or freezer.

During this and future meetings, the unit leader should make assignments to individuals who would best meet the needs of that neighborhood.

Remember to account for school kids...

Assign a couple to be ready to do a damage and injury survey. If possible this couple should have access to a walkie talkie so this information could be immediately reported to civil authorities.

List all children going to the same school. Write a request that, in an emergency, these children be released from school to a preassigned person from your neighborhood. Assign a person to this responsibility who is well known to the children and is usually at home. Include all the parent's signatures and give this list to the school principal to keep on file. In case some parents are unable to get home or are otherwise detained, this will assure that their children will be gathered and cared for until their return. Ask the schools to keep this list on file as well as on computer, as they may not have access to the computer in some kinds of emergencies.

Assign someone to store materials on hand to make a temporary outside toilet for their unit in case the sewers break. Have them also keep

water purification chemicals available.

Assign someone to make up a menu for several days of mass community cooking for the unit, preferably using items that would be naturally rotated in most homes. Have this person assign neighbors to keep different ingredients for these menus on hand at all times.

...develop a family message system...

Assign individuals for care of preschool and elementary age children of the unit in case their parents are injured or have other assignments in the community. Use older children to help.

Suggest that people choose an outside gathering place for their family in case their home is damaged. Have each family decide on a place to put a note-keeping box, so members of the family and unit can leave communications for one another. This information would be necessary to keep someone from entering a dangerously damaged home in search of people who have already left the area.

Encourage families to each buy an inexpensive walkie talkie.

Emergency chairman

If you are able to organize several neighborhoods, choose a group emergency chairman. The emergency

chairman should map the area and divide it into units of 10 to 12 families living in close proximity to one another. Families with special needs such as illness, elderly people, widows, etc. may need to be placed with more capable units. Use natural boundaries such as voting districts, school boundaries, or church parishes where large numbers of people already know one another and work well together. This would be a great project for the school's PTA or as an eagle scout project.

...and practice fire, earthquake and evacuation procedures.

Ask local ham radio operators to help with communication plans. In an emergency, they can receive valuable information that could then be sent to your people through your CB radios or walkie talkies.

Regular meetings

The units should meet together as often as they feel necessary. Once every four months should be adequate after the initial planning stage. Include children in discussions and decisions where possible.

Try to keep a positive and happy outlook with the kids, and don't frighten them. This would be a good time to talk about updating 72-

hour kits, reviewing evacuation plans, and encouraging members to have fire and earthquake drills.

Training

Train as many people from the area neighborhoods as possible in CPR, first aid and basic civil defense (sheltering, fallout meters, evacuation, etc.). Use instructors from your community's Civil Defense Department, American Red Cross, and area schools. Train a team in a 50-hour advanced first aid course. (We trained and certified 80 people in advanced first aid for an area of about 5,000 individuals.) Choose people who have a natural interest in first aid, but not professional medical personnel who would be required to work on a state level.

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 cofounder 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: keeping food storage
from turning into a disaster

By James T. Stevens

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

So you've stored up food to use for emergencies?

Make sure you protect your preparations for disaster from turning *into* a disaster from:

1. Poor food selection.
2. Improper packaging and storage techniques.
3. High storage temperatures.
4. Moisture and microbial infiltration.
5. Insect and rodent infestation.
6. Storage period exceeding shelf life.

Here's how these problems spell disaster for your food storage — and what you can do to prevent the waste.

1. Poor food selection.

Results: Food deteriorates or becomes unacceptable to family tastes.

Solutions:

- Select storage-grade foods for in-home storage.
- Choose foods for nutritional value, storage qualities, and in most cases, the taste buds.
- Store what you normally eat.
- Eat from stored supplies regularly as part of the daily diet to help maintain or develop a taste for the foods available in the storage program.
- Never purchase outdated, broken, or dented goods of any kind for food storage.

FYI: Damaged, canned, or packaged foods will be contaminated if the airtight seal has been broken. Avoid bulging cans — they're already suspect and dangerous.

2. Improper packaging and storage.

Result: Rancidity sets in when airtight seal of a container is broken.

Solutions:

- Foods must be clean at the time they are purchased.
- Foods must be clean at time of packaging.
- Foods must be sealed so insects, pests, and moisture cannot gain entrance.

FYI:

- Storage rates at which foods deteriorate depend upon the food, its purity, the way it's stored, and especially upon its environmental temperature.
- When a package or can has been opened, the useful life of its contents is greatly shortened.
- The warmer the ambient air, the faster the onset of rancidity (small amounts of natural fats in foods become foul-smelling and slightly toxic when the food's protective shell is breached by oxidants).
- Many dried vegetables, including corn, green beans, and green peas are subject to rancidity when kept in unsealed containers.
- Rancidity may be minimized by storing in properly sealed containers and storage in a cool, dry, and dark location.

3. High storage temperatures.

Results: Chemical reactions occur in foods which may not be apparent, diminishing shelf life, food quality and safety.

Solutions:

- Locate food storage in dry, cool place, below 70 degrees Fahrenheit.
- Foods should be stored as close to 40 degrees Fahrenheit as possible.

FYI:

- The cooler and drier foodstuffs are kept, the longer they remain tasty and nourishing.
- Generally, changes in color, flavor, or texture are accompanied by loss of nutritional value.
- For every increase of 20 degrees Fahrenheit, the shelf life of stored food is decreased by almost 50 percent.
- Canned fruits and vegetables may soften and become mushy, and have an offensive odor.

4. Moisture and microbial infiltration.

Results: Food quality and nutrition deteriorate (especially when both moisture and temperature are high).

Solutions:

- Storage must be properly sealed and kept dry and cool.
- Moisture is excluded only with an airtight seal.
- Place food on shelves when possible.
- Avoid placing metal cans directly on concrete or dirt surfaces; use plywood or thick cardboard in layers to prevent cans from direct contact with concrete floors.

FYI:

- Moisture hardens and spoils all forms of storage foods, whether dried in-home or dehydrated commercially, crystallized (such as sugars, salt, desserts, and drink mixes), powdered products (such as baking powder, flours, cornstarch, baked goods and boxed mixes), processed foods (such as cereals, chips and crackers), and canned or bottled vegetables, meats, soups, fish, etc.
- Mold grows in a very low moisture environment and is the prime cause of spoilage in stored foods.
- Molds produce the most poisonous toxins known.
- Moldy foods should always be discarded.
- Metal containers often rust through and spoil food. Keeping storage containers away from moisture by placing cardboard, plywood or pieces of lumber beneath metal cans to prevent contact with concrete floors. Shelf life of foods in metal containers is extended by coating containers with wax or paraffin.

5. Insect and rodent infestation.

Result: dangerous food contamination.

Solutions:

- Use proper packaging to protect contents.

- Use metal cans or heavy-duty, food-grade, waterproof, plastic containers with airtight lids for all powdered products.

- All glass and crockery should have airtight seals.

FYI:

- Fumigate your pantry according to the best information available from county extension agents.
- When evidence of pest or critter presence is seen, the foods they've spoiled must be discarded.
- Weevils found in stored grains and some processed grain products, including flours, are clean and edible without harm to the human system.
- Most commercial foods are intact and are generally free from insects.
- In paper packaging such as a paper flour sack, even a tiny hole may permit pests to enter and lay their eggs; the larvae will infest the foods quickly.
- Normally, packaging protects foods during shipping and storage on market shelves.

6. Expired shelf life.

Results: Food quality and nutritional values deteriorate continually over time (2-5 percent each year).

Solutions:

- Store what is already enjoyed by your family and the problem of storage period exceeding the useful life of stored food simply ceases to exist.
- Store what you eat, and eat what you store.
- Keep taste buds acquainted with stored foods to minimize psychological rejection of the foods during emergencies.
- Rotate your food between storage and daily use to prevent spoilage and loss of food value and flavor.

FYI:

- Always place the oldest canned goods in front and mark them so they will be consumed first.
- Chemical reaction of metal containers occurs more rapidly with certain foods.
- Canned foods will remain usable, if not wholesome, as long as the container seals remain intact and cans are not bulged.
- Canned goods should be rotated and replaced with new food as utilized.
- Solids tend to settle if not rotated.
- Old, out-of-date food is edible, but is not as palatable or nutritious.

Tacda Letter

For members of
The American Civil Defense Association
Spring 1998

Are you prepared for the Y2K waves? As mentioned in this month's "Washington Perspectives" column (page 2), it's really impossible to know whether the Y2K -- short for "Year 2000" -- problem is going to have a titanic impact.

Our advice: Hope for the best, but prepare for a reasonable worst case.

How can we prepare? **First**, store non-perishable foods and essential supplies to last at least several months if not a year or more for your family/friends. While expensive in the short term, such storage can save money in the long term, even if the economy remains stable. Many organizations sell storage food/supplies, including Tacda (please see the Tacda Store catalog on the centerfold of this issue).

Second, put some of your investments into gold or silver. Even though gold bullion was confiscated during the Great Depression, numismatic (or rare, collectable) gold coins were not confiscated. Store as much food and supplies to reduce the need for money, but retain the flexibility of universally valued commodities, such as silver and gold.

Third, learn to live without power or external support. You may want to develop alternative energy sources, such as solar or hydro power generation capabilities.

Fourth, consider whether your job is one that will "survive" a depression. If not, then consider changing jobs or learning skills that can be useful in times of crisis.

Fifth, develop a network of friends who are preparedness-minded. They can help you develop reasonable plans for your area and may prove essential for survival in hard times.

Sixth, if you live in the city, you may want to buy some land out in the country that is provisioned for a survival getaway.

Seventh, please support organizations -- whether private (like Tacda) or government agencies -- that promote reasonable preparedness.

Thanks for your support!

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/

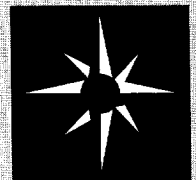
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defense@tacda.org
(800) 425-5397
(904) 964-9641 (fax)



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

July 10-12

16th annual meeting, Doctors for Disaster Preparedness, Scottsdale Hilton, 6333 N. Scottsdale Rd., Scottsdale, Ariz. Theme — "Truth of Consequences: Scientific, Economic, and Defense Issues for the New Century." For info, call: (520) 325-2680.

July 15-17

Review of the Causes and Consequences of Cold Events: A La Nina Summit, Boulder, Colo. Sponsors: United Nations University and National Center for Atmospheric Research (NCAR). Contact: Michael Glantz, Convenor, or D. Jan Stewart, Workshop Coordinator, ESIG/NCAR, P.O. Box 3000, Boulder, Colo. 80307; (303) 497-8117; fax: (303) 497-8125; e-mail: jan@ucar.edu.

July 28-Sept. 3

Eleventh International Disaster Management Course, Faringdon, Oxfordshire, U.K. Offered by: The Disaster Management Centre (formerly, Disaster Preparedness Centre), Cranfield University. Contact: Disaster Management Centre, Cranfield University, RMCS, Shrivenham, Swindon, Wiltshire SN6 8LA, U.K.; tel: +44 1793 785287; fax: +44 1793 785883; e-mail: disprep@rmcs.cranfield.ac.uk; WWW: <http://www.rmcs.cranfield.ac.uk/~dpc>.

Aug. 18-22

25th Symposium of the International Committee for the History of Technology (ICOHTECH), Lisbon, Portugal. Contact: James C. Williams, Professor of History, De Anza College, 1130 Delynn Way, San Jose, Calif. 95125-3619; (408) 269-4837; e-mail: jcw@netcom.com. Includes sessions on "Technology and Natural Disasters."

Sept. 8-10

Coastal Environment '98: "Environmental Problems in Coastal Regions," Cancun, Mexico. Contact: Liz Kerr, Coastal Environment '98 Conference Secretariat, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA U.K.; tel: (44) (1703) 293 223; fax: (44) (1703) 292 853; e-mail: liz@wessex.ac.uk; WWW: <http://www.wessex.ac.uk/>.

Sept. 20-24

Wetlands '98: Integrating Wetland/Floodplain Ecosystems in Water Projects/Watershed Management, St. Louis. Contact: Association of State Wetland Managers, Box 269, Berne, N.Y. 12023-9746; (518) 872-1804; fax: (518) 872-2171; e-mail: aswmi@aol.com.

Sept. 27-30

Disaster Management: Crisis and Opportunity, Cairns, Australia. Sponsor: Center for Disaster Studies, James Cook University. Contact the Center for Disaster Studies, P.O. Box 6811, James Cook University, Cairns, Queensland 4870, Australia. tel: + (61 70) 42 1215; fax: + (61 70) 42 1214; e-mail: linda.berry@jcu.edu.au.

Sept. 29-30

1998 Wisconsin Governor's Conference on Emergency Management, Milwaukee. Contact: Diane Kleiboer, Wisconsin Emergency Management, P.O. Box 7865, Madison, Wis. 53707-7865; (608) 242-3200.

Oct. 2-3

Emergency Expo '98, Werribee Racecourse, Victoria, Australia. Organizers: Hoppers Crossing Fire Brigade. Contact: Hoppers Crossing Fire Brigade, P.O. Box 1126, Hoppers Crossing, Victoria 3029, Australia; tel: (03) 9748 0829; fax: (03) 9748 8341; e-mail: hcrossing.fs@cfa.vic.gov.au; www.vicnet.net.au/~hxfb.

Oct. 5-9

Emergency Animal Disease Preparedness and the Needs of the Non-Veterinary Agencies, Victoria, Australia. Contact: AEMI, Main Road, Mt. Macedon, Victoria 3441, Australia; tel: (03) 5421 5100; fax: (03) 54215273; e-mail: aemi@ema.gov.au; www.ema.gov.au.

Oct. 6-8

Worldaid '98: Global Exposition and Conference on Aid in Action, Geneva. Contact: WorldAid Secretariat, c/o Palexpo, Orgexpo, P.O. Box 112, 1218 Grand-Saconnex, Switzerland; tel: +41 (22) 76111 11; fax: +41 (22) 798 01 00; e-mail: info@worldaid.org; www.worldaid.org.

Oct. 7-9

First International Conference on Computer Simulation in Risk Analysis and Hazard Mitigation, Palau de Pineda, Valencia, Spain. Sponsors: Wessex Institute of Technology, Universitat Jaume I, and others. Contact: Paula Doughty-Young, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, U.K.; tel: 44(0)1703 293223; fax: 44 (0)1703 292853; e-mail: wit@wessex.ac.uk; www.wessex.ac.uk/.

Oct. 11-14

1998 Association of State Dam Safety Officials (ASDSO) Annual Conference, Las Vegas. Contact: ASDSO, 450 Old Vine Street, Second Floor, Lexington, Ky. 40507; (606) 257-5140; fax: (606) 323-1958; e-mail: damsafety@aol.com.

Oct. 11-14

Society for Risk Analysis-Europe (SRA-E) 1998 Annual Conference: "RiskAnalysis: Opening the Process." Paris. Organizers: Institut de Protection et de Surete Nucleaire. Contact: Philippe Hubert, Conference Director, IPSN DPHD SEGR "SRA Paris Conference," BP 692265 Fontenay aux Roses Cedex-France; tel: +33 (0)1 46 54 79 11; fax: +33 (0)1 46 54 88 29.

Oct. 12-15

Business Recovery for Your Organization, Ashburn, Va. Offered by University of California Berkeley Extension through the George Washington University Virginia Campus in Ashburn, Va. Contact: Greg Shaw, Director, Training and Education, Institute for Crisis, Disaster, and Risk Management, The George Washington University Va Campus, 20101 Academic Way, Suite 220B, Ashburn, Va. 20147-2604; (703) 729-8271; fax: (703) 729-8272; e-mail: glshaw@gwu.edu; www.seas.gwu.edu/seas/institutes/icdm.

Oct. 17-20

Southern California Earthquake Center (SCEC) 1998 Annual Meeting, Palm Springs, Calif. Contact: SCEC, USC, University Park, Los Angeles, Calif. 90089-0740; (213) 740-5842; fax: (213) 740-0011; e-mail: mcraney@terra.usc.edu; www.usc.edu/go/scec.

Oct. 18-23

The Management of Emergencies and Disasters - A British Council International Seminar, Stoke-on-Trent, U.K.. Contact: Paul Viggers, Marketing and Recruitment Manager, International Seminars; tel: +44 (0)1865 316636/ +44(0)1865 302709; fax: +44(0)1865557368; e-mail: international.seminars@britcoun.org; www.britcoun.org/seminars/health/isem8032.htm.

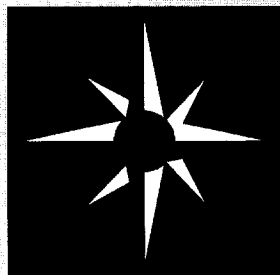
Oct. 19-20

1998 Annual Meeting of the Eastern Section, Seismological Society of America, Millersville, Pa. Contact: Charles K. Scharnberger, Department of Earth Sciences, Millersville University, P.O. Box 1002, Millersville, Pa. 17551-0302; (717) 872- 3289; fax: (717) 872-3985; e-mail: cscharnb@uorander.millersv.edu; www.seismosoc.org.

Oct. 19-23

Second European Conference on Applied Climatology, Vienna, Austria. Contact: Zentralanstalt fur Meteorologie und Geodynamik, Postfach 342, A-1191 Vienna, Austria; tel: +43 1 36 0 26 2201; fax: +43 136 0 26 2672; e-mail: ecac@zamg.ac.at; www.zamg.ac.at/~ECAC98.

New compass, same directions.



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