



# The Earthquake Exchange



## Special points of interest:

- Want to contribute to this newsletter? Contact us. [Prepare@UtahEarthquake.org](mailto:Prepare@UtahEarthquake.org)
- NEW FEATURE - Pg. 2
- Set one preparation goal per month and then actually do it! Get the family involved. Start with the basics in home & personal safety.

## Introducing... You!

### Letter from the Editor

This month brings a new feature to *The Earthquake Exchange* that I hope you'll enjoy.

*This Is Life* highlights the experiences of our friends in the community - people just like you!

*This Is Life* is a venue to share tips, valuable secrets, and anecdotes about any & all facets of preparation.

**I need your help with this feature! Write to me with your ideas and stories.**

- Do you know a good way to track the rotation of your food storage?
- Have you found a way to teach your children about emergencies?
- How do you budget for 72-hour kit supplies?

- How do you make your batteries last longer?
- Is there something we should all store that no one considers?
- Have you ever experienced an earthquake or other natural disaster? Tell me about it.
- When do you find time to update your emergency kits?
- Do you know a great "year's supply" recipe?
- What's covered in your family's emergency plan? Do you practice? When? How?
- What have you done to prepare for an earthquake at work?
- What can you tell me about your CERT, Red Cross, or First Aid training? Other activism?
- Anything else?



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**I want to hear your answers! You don't have to be a preparedness guru to share. One tip is as good as 100.**

Give me tips in 150 words or less. You can share as many as you'd like.

Send an email, including your name, city, and state to [tips@UtahEarthquake.org](mailto:tips@UtahEarthquake.org).

**Enjoy this new resource!**  
*Kelly E. H. Johnson*

## Inside this issue:

Helping the Community: True Gifts of Love	2
This Is Life... Buying Bulk Food Storage	2
Monthly Tip: Storing Grains with Diatomaceous Earth	2
Cont'd Article: What's the Chance? When?	3

## What's the chance there will really be an earthquake? When?

### History of Earthquakes along the Wasatch Fault *By Jamie Robinson*

Large earthquakes (magnitude 6.5 to 7.5) are common throughout the geologic past on the several segments of the Wasatch Fault. Since that last major earthquake hundreds of years ago, 2.1 million people and a large stock of poorly reinforced buildings have occupied the earthquake zone. Because of the devas-

tating potential of the next earthquake in this zone, there is great interest in predicting the location and time of the next major seismic event along the Wasatch Fault.

The key to understanding the present earthquake threat the Wasatch Fault poses is to

understand *past* earthquakes of the Wasatch Fault. During the past 6,000 years, at least 20 large earthquakes have occurred on the six different segments of Wasatch Fault, an average of one major earthquake every 300 years.

--Continued on page 3

## Helping the Community: True Gifts of Love!

Opportunities for gift giving abound all year long, but the magic of December is that we begin to think about our friends and loved ones with special consideration. As you make lists and hunt for bargains, don't forget gifts that can save lives and help others be prepared in an emergency & comfortable through cold months.

### Here are a few suggestions:

- Donate blood through your local Red Cross.
- Give non-perishable

foods, especially those high in protein, to the state or city food bank.

- Buy gifts such as 72-hour kit supplies, water filters, or long-term storage items like food, rotation shelves, toilet paper, etc. Prices range from high to inexpensive stocking stuffers.
- Wrap a candle and a small box of matches and send them home with your guests as a party favor.
- Add phone numbers and

emails to your holiday greeting card list. Print the list for your emergency kit.

- Make a car kit for a friend. Include a blanket, hand warmers, water, snacks, an ice-scraper, and a collapsible shovel.
- Share used & new blankets and coats with an agency that will distribute them to those in need.
- Give a first aid kit or offer to pay for first aid classes.



**There are gifts that can save lives and help loved ones be prepared and comfortable in an emergency.**

## This Is Life... Buy in Bulk, on Sale

Over the last 10 years, our family has bought food for our food storage in bulk when it is on sale. This way, our dollar seems to go a lot farther towards obtaining enough food for our long-term storage. We have bought basic foods, like rice, rolled oats, powdered dry milk, canned fruit, canned vegetables and beans,

soups, yeast, sugar, and salt. Buying in bulk can save you a lot of money, and save you the stress of worrying about running out of certain items you use regularly.

We have also found that when our family's tastes change, we need to change what we store. The food that is not *our*

favorite anymore we still put to good use!

We check that the food is still good and donate it to a food bank to help those in need!

Ruth Ann Johnson  
Lindon, Utah

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***“We have also found that when our family's tastes change, we need to change what we store.”***

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## Monthly Preparation Tip: Diatomaceous Earth

### Wikipedia

<http://en.wikipedia.org/wiki/Diatomite>

**Diatomaceous earth** is a naturally occurring, soft, chalk-like sedimentary rock that is easily crumbled into a fine white to off-white powder. This powder has an abrasive feel, similar to pumice powder and is very light, due to its high porosity. Diatomaceous earth consists of fossilized remains of diatoms, a type of hard-shelled algae. Diatomite is also used as an insecticide, due to its physico-sorptive properties. The fine powder absorbs lipids from the cuticle, the waxy outer layer of insects' exoskeletons, causing them to dehydrate. Arthropods

die as a result of the water pressure deficiency, based on Fick's law of diffusion.

### Walton Feed, Inc.

<http://waltonfeed.com/grain/faqs/ive.html>

Creatures with internal skeletons such as humans, cattle and pets have means of resisting such damage and are not harmed. Thus, it is possible to mix a small amount of DE into your stored grains and beans to deter insect infestations without having to remove the dust again before you consume them. *Diatomaceous earth works in a purely physical and not chemical manner and thus has no chemical toxicity.* There are

actually two kinds of DE to be found on the market and only one of them is suitable as an insecticide to use in your stored grains. **DO NOT USE the type sold by swimming pool suppliers as a filtering agent.** DE to be used for filtering has been subjected to a heat treatment that dramatically increases its crystalline silicate content and makes it unsuitable for use with your foodstuffs. **The DE that is needed for use in food storage has a crystalline silica content of no more than 1-1.5%.** It is commonly sold in hardware and garden stores as an "organic pesticide" and is available from a number of storage food dealers.



**There are various ways to store your grains to protect them from insects. Diatomaceous earth is fairly effective, and it won't kill the oxygen content in your containers, allowing for later sprouting.**

**Educate  
Prepare  
Communicate  
Share**

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**We're on the Web!**

Past newsletters are now posted on our web site. Go to [www.UtahEarthquake.org](http://www.UtahEarthquake.org) and click Free Newsletter.



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<http://geology.utah.gov/online/pdf/pi-40.pdf#search=22probability%20earthquake%20along%20the%20Wasatch%20Fault%22>

*UtahEarthquake.org is a not-for-profit educational tool. Originally created with help from three junior-high students, it was conceived during a UNICEF lecture about natural disasters. The website's mission is to fill a community need for concise earthquake preparation information. The website and newsletter serve to provide easy access about everything from the physical laws of plate-tectonics to home retrofits, emergency instruction, food & water storage, community action, public events, and disaster & supply planning.*

*Although every reasonable effort is made to ensure information is accurate, information, data, suggestions, links, instructions and guidelines are provided for informational purposes only. UtahEarthquake.org makes no guarantees of any kind. This newsletter, and the information posted herein, may contain personal opinions.*

## Cont'd from Page 1 — What's the chance? When?

Studies of ancient earthquakes (paleoseismology) show that the last large seismic event occurred around 500 years ago. There have only been a few medium sized earthquakes since that time which indicates that the fault is locked and is strong enough to store enough plate motion energy to generate a large earthquake.

One way of testing if this is happening is by taking high-resolution GPS measurements of line-length changes across the fault. These studies conducted by University of Utah and Brigham Young University demonstrate that the lines are lengthening by 2-3 mm per year.

If the westward inclined fault is

like a brick then the GPS data indicate the brick is attached to a spring that has been stretching westward for hundreds of years. Eventually the energy accumulating will be enough to pull the brick. We live on the brick, and when it shifts at nearly the speed of sound only the most well constructed and sited buildings escape severe damage.

Data from past earthquake recurrence, and current GPS data, indicates the Wasatch Fault is as active now as it has been in the past, and that a large earthquake could occur at anytime. This is especially true in areas where it has been up to 1350 years or more since the last major seismic

event, such as the Salt Lake City region (see graph above).

Although a great deal is known about *where* earthquakes are likely to occur, there is currently no reliable way to predict the day, month or even decade *when* a seismic event will happen in any specific location. There is a likelihood a large earthquake could occur while you are reading this newsletter, or it could occur during your grandchildren's lifetime.

Either way it is time to act now and not live in denial. The 400,000 people that died during the past two years from earthquakes in many populated regions like the Wasatch Front also could not predict when something would happen. Estimating the probability is difficult because of the level of uncertainty found in the data of past events.

The *future* behavior of the Wasatch Fault is an assumption based on *past* behavior, and our understanding of past earthquakes is very limited. Published probabilities vary greatly and are based on many poorly constrained assumptions. Informing yourself about data available is the best way to gauge the threat we face.

