



# WITHOUT WARNING!

CENTRAL & EASTERN U.S. EDITION

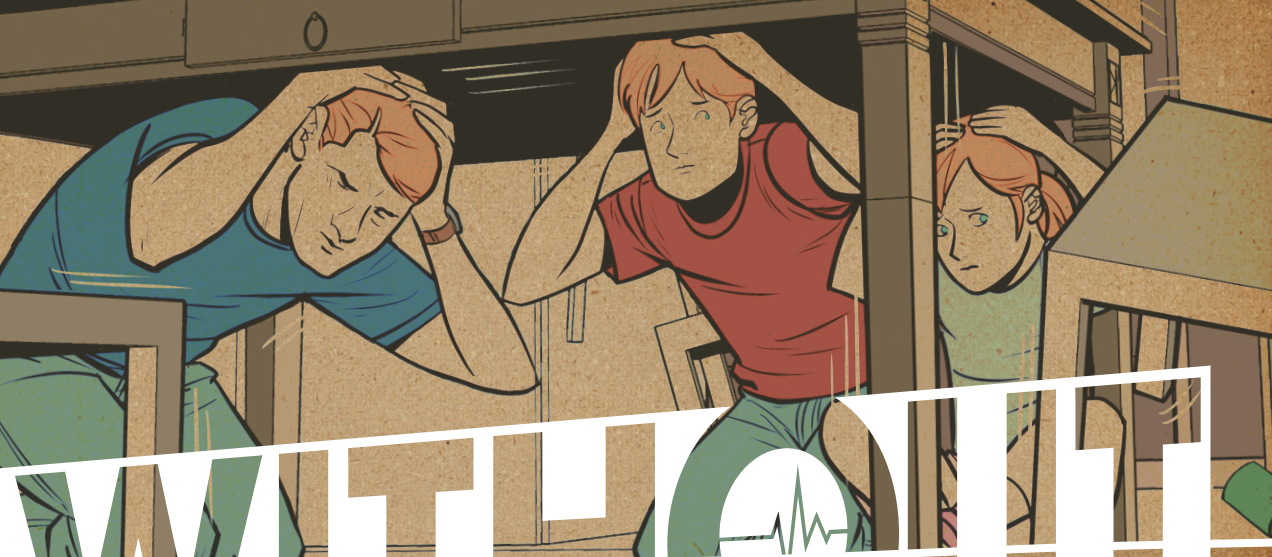


JEREMY BARLOW  
DAVID HAHN



**SCEMD**  
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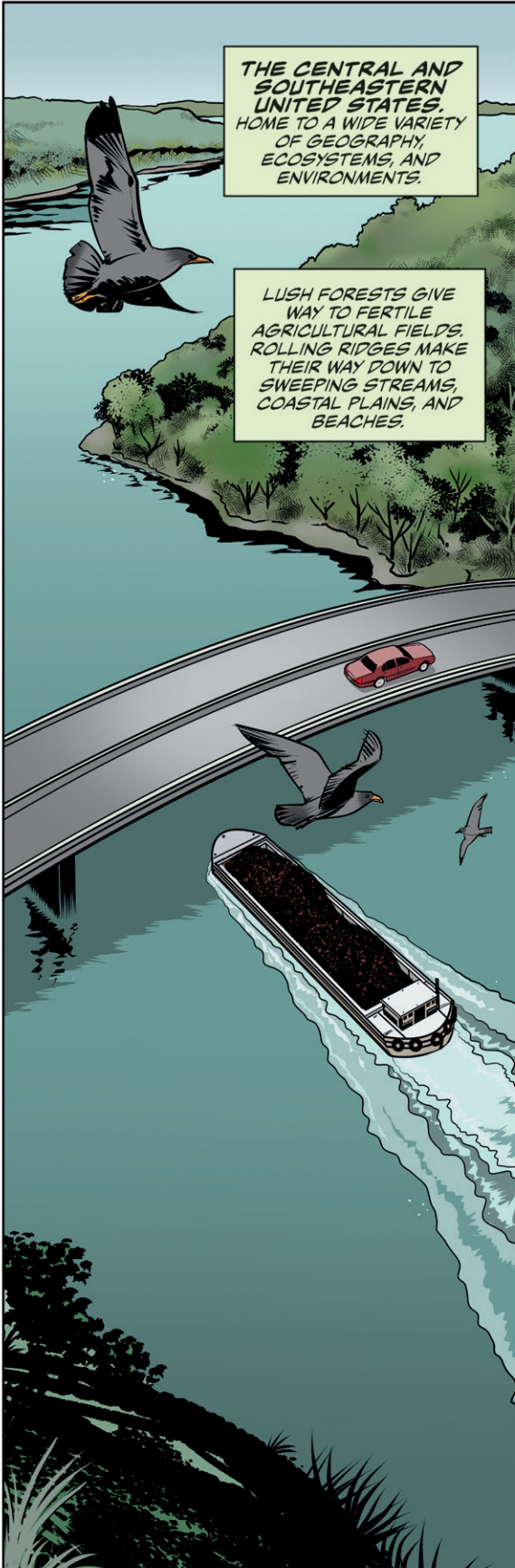
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THE CENTRAL AND SOUTHEASTERN UNITED STATES, HOME TO A WIDE VARIETY OF GEOGRAPHY, ECOSYSTEMS, AND ENVIRONMENTS.

LUSH FORESTS GIVE WAY TO FERTILE AGRICULTURAL FIELDS, ROLLING RIDGES MAKE THEIR WAY DOWN TO SWEEPING STREAMS, COASTAL PLAINS, AND BEACHES.

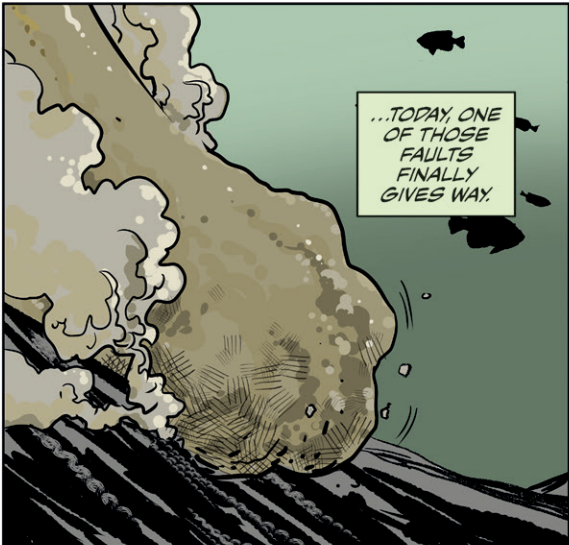


BUT THAT'S NOT THE ONLY CONTRAST HERE.

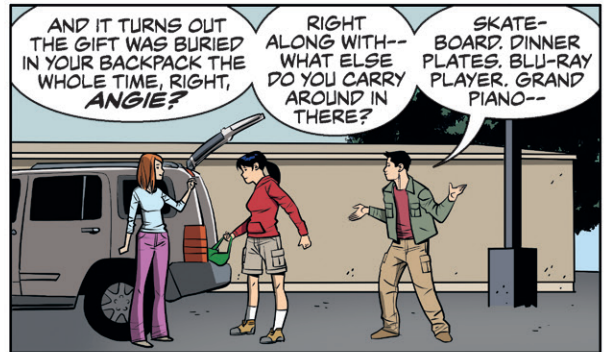
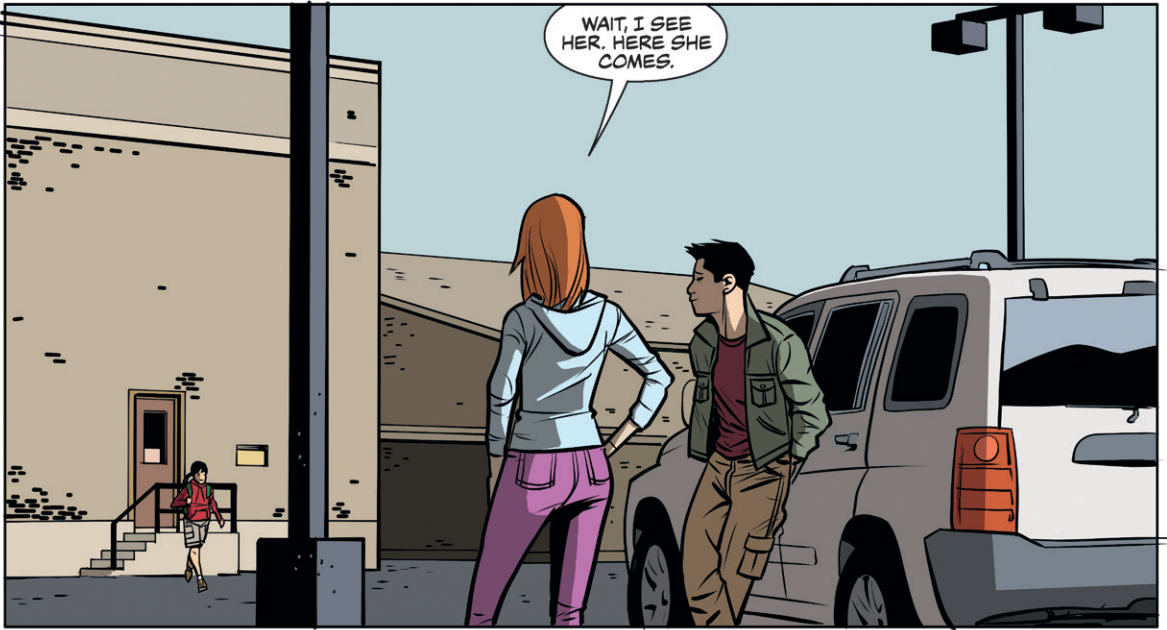


BENEATH THE SURFACE LIES A RARELY THOUGHT ABOUT THREAT-- SEVERAL SEISMIC ZONES CAPABLE OF PRODUCING DAMAGING, EVEN CATASTROPHIC, EARTHQUAKES.

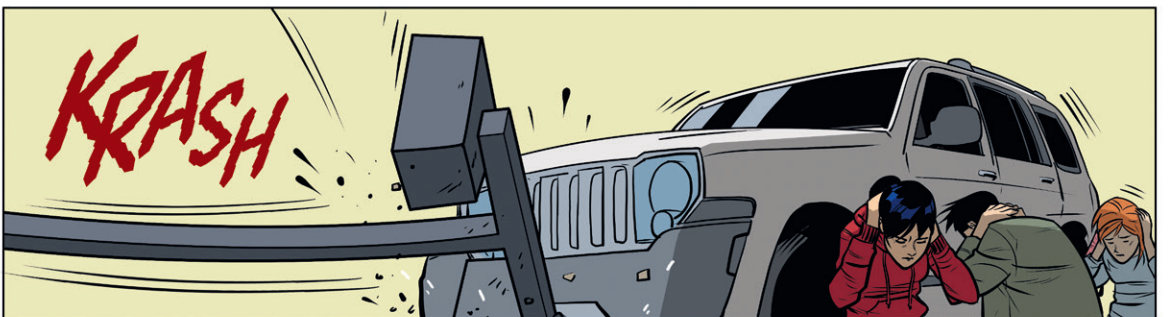
FOR HUNDREDS OF YEARS FAULTS IN THESE ZONES HAVE BEEN SHIFTING AND BUILDING IMMENSE PRESSURE...



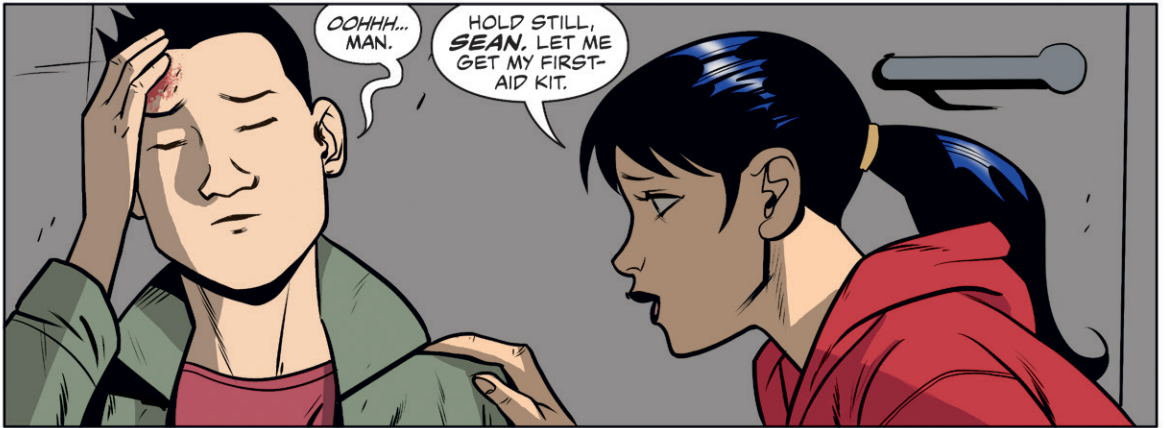
...TODAY, ONE OF THOSE FAULTS FINALLY GIVES WAY.











OOHHH... MAN.

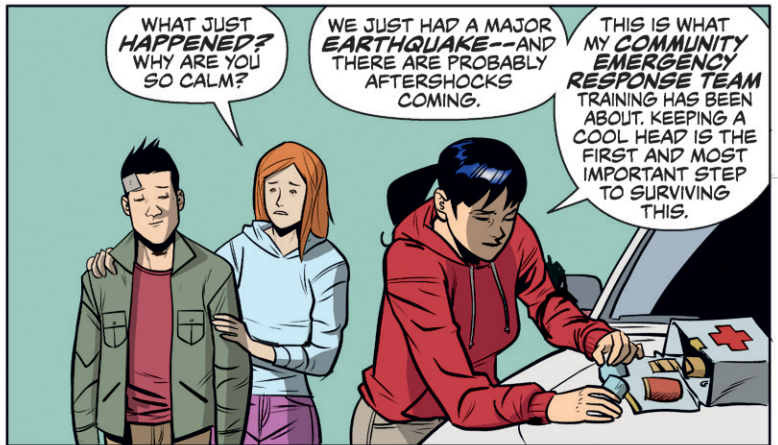
HOLD STILL, SEAN. LET ME GET MY FIRST-AID KIT.



THIS IS BECAUSE I GAVE YOU GUFF, ISN'T IT?

YOU WANTED TO SEE WORSE THAN ZOMBIES.

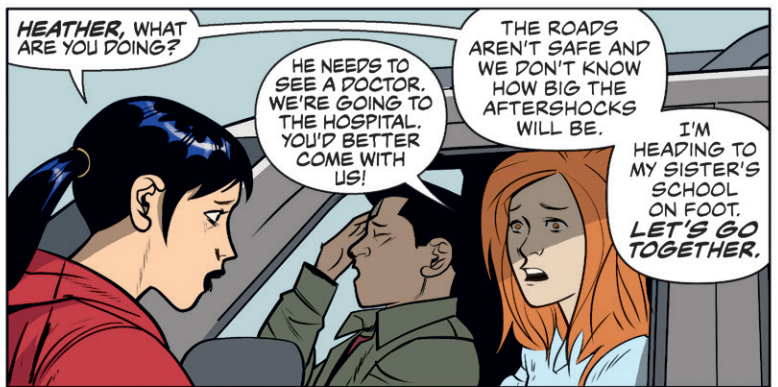
YOU TOOK A LITTLE SHRAPNEL FROM THAT LAMP, BUT I'VE CLEANED IT OUT. YOU'LL BE OKAY.



WHAT JUST HAPPENED? WHY ARE YOU SO CALM?

WE JUST HAD A MAJOR EARTHQUAKE--AND THERE ARE PROBABLY AFTERSHOCKS COMING.

THIS IS WHAT MY COMMUNITY EMERGENCY RESPONSE TEAM TRAINING HAS BEEN ABOUT. KEEPING A COOL HEAD IS THE FIRST AND MOST IMPORTANT STEP TO SURVIVING THIS.

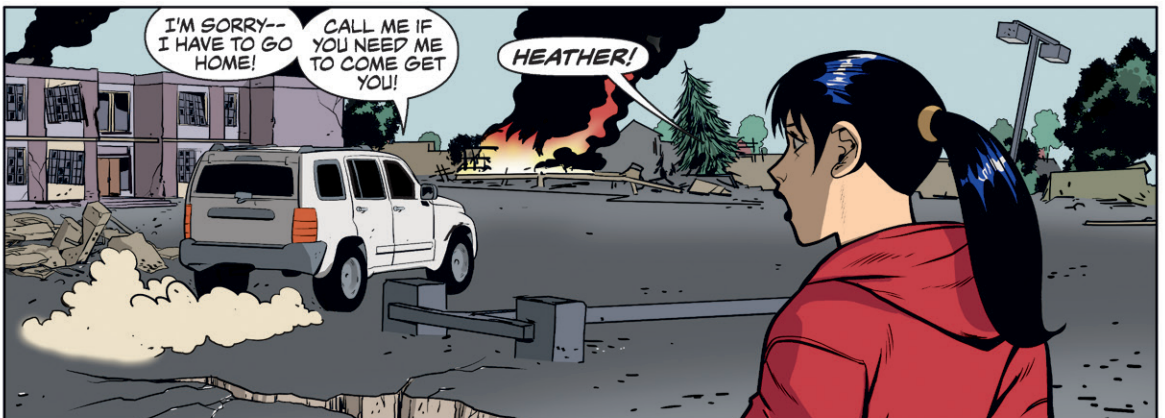


HEATHER, WHAT ARE YOU DOING?

HE NEEDS TO SEE A DOCTOR. WE'RE GOING TO THE HOSPITAL. YOU'D BETTER COME WITH US!

THE ROADS AREN'T SAFE AND WE DON'T KNOW HOW BIG THE AFTERSHOCKS WILL BE.

I'M HEADING TO MY SISTER'S SCHOOL ON FOOT. LET'S GO TOGETHER.

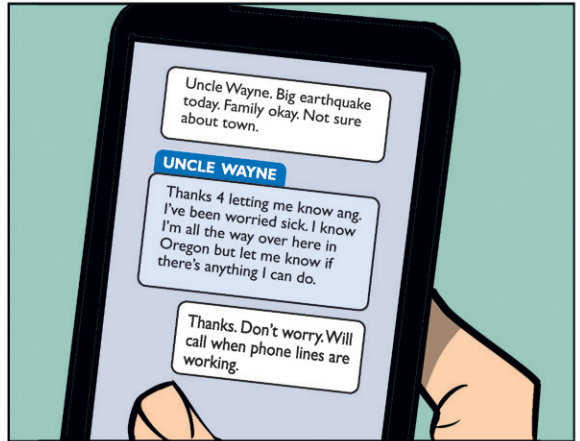
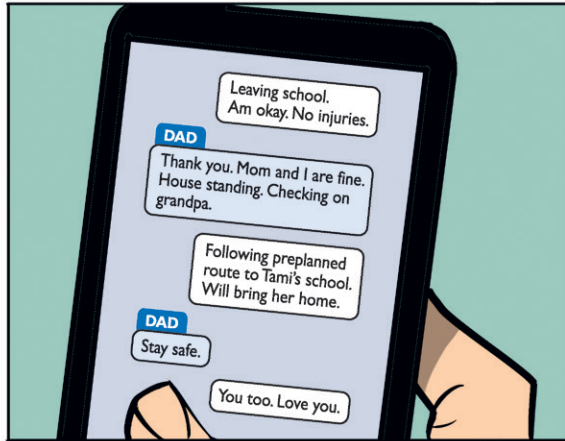


I'M SORRY-- I HAVE TO GO HOME!

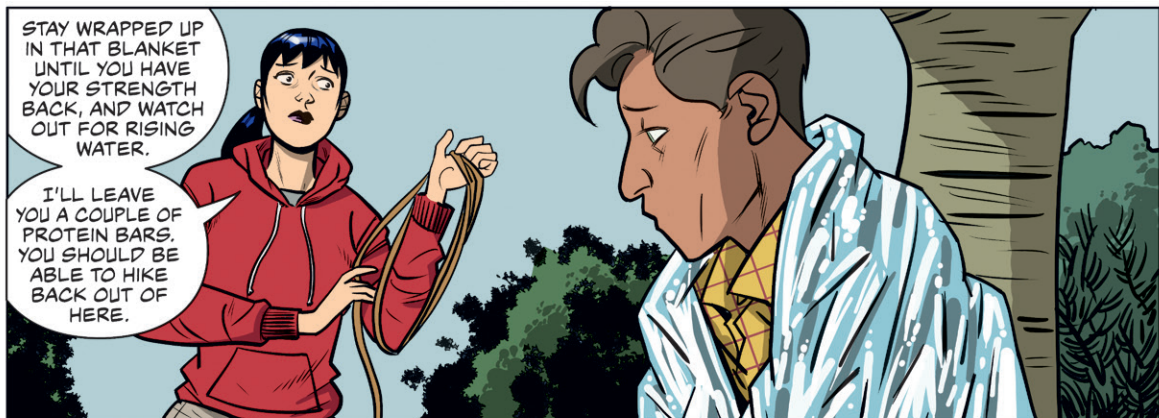
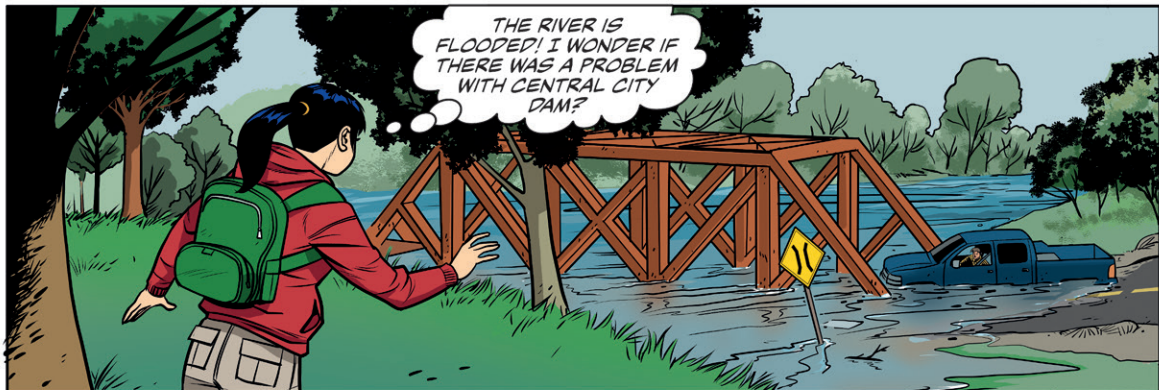
CALL ME IF YOU NEED ME TO COME GET YOU!

HEATHER!

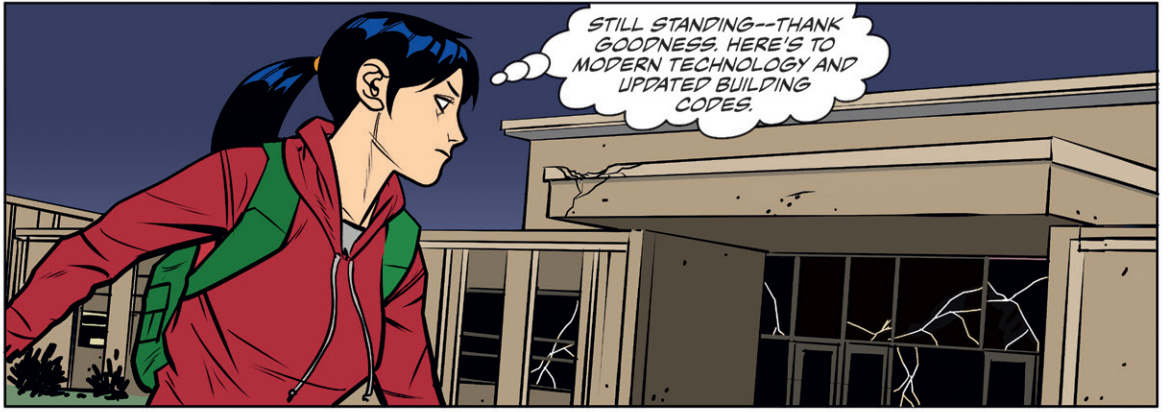








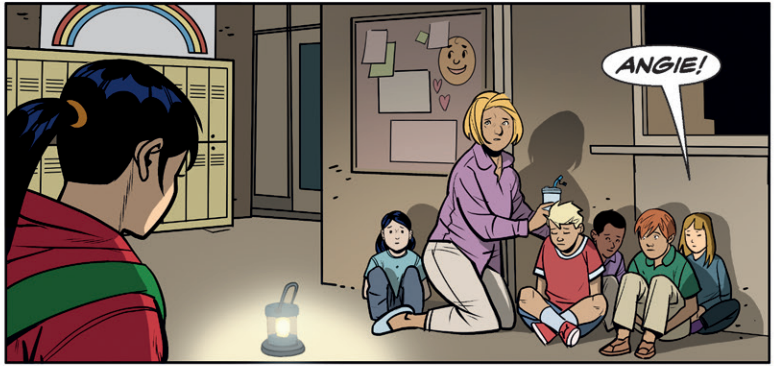




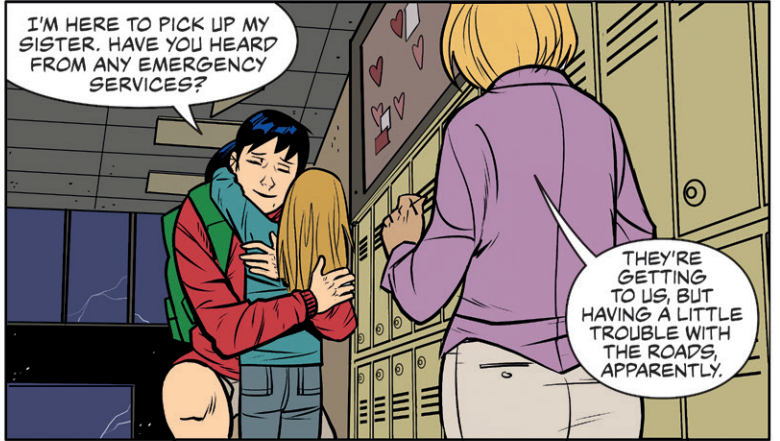
STILL STANDING--THANK GOODNESS. HERE'S TO MODERN TECHNOLOGY AND UPDATED BUILDING CODES.



IF THEY FOLLOWED THE SCHOOL'S DISASTER PLAN, TAMI AND THE OTHERS SHOULD BE EASY TO FIND...

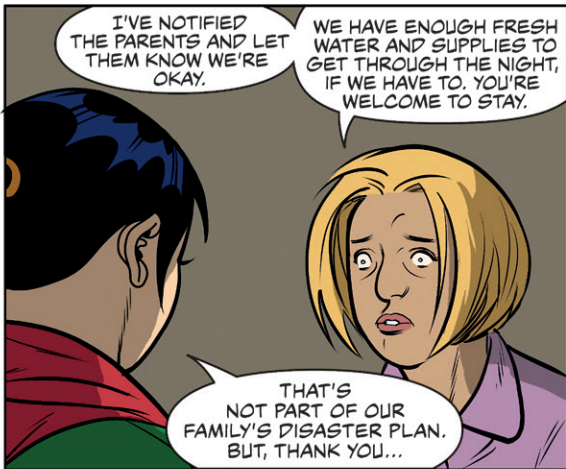


ANGIE!



I'M HERE TO PICK UP MY SISTER. HAVE YOU HEARD FROM ANY EMERGENCY SERVICES?

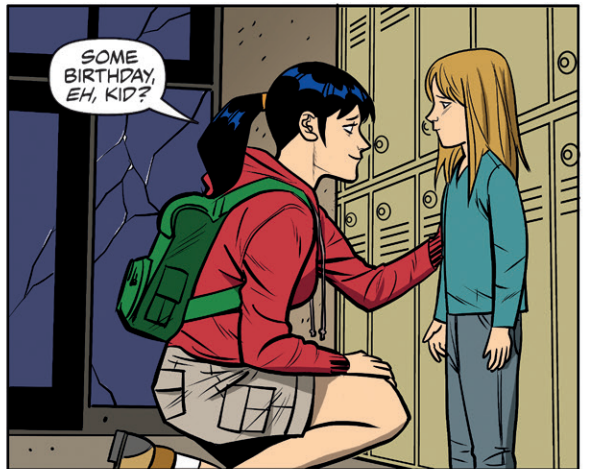
THEY'RE GETTING TO US, BUT HAVING A LITTLE TROUBLE WITH THE ROADS, APPARENTLY.



I'VE NOTIFIED THE PARENTS AND LET THEM KNOW WE'RE OKAY.

WE HAVE ENOUGH FRESH WATER AND SUPPLIES TO GET THROUGH THE NIGHT, IF WE HAVE TO. YOU'RE WELCOME TO STAY.

THAT'S NOT PART OF OUR FAMILY'S DISASTER PLAN. BUT, THANK YOU...



SOME BIRTHDAY, EH, KID?



LATER...

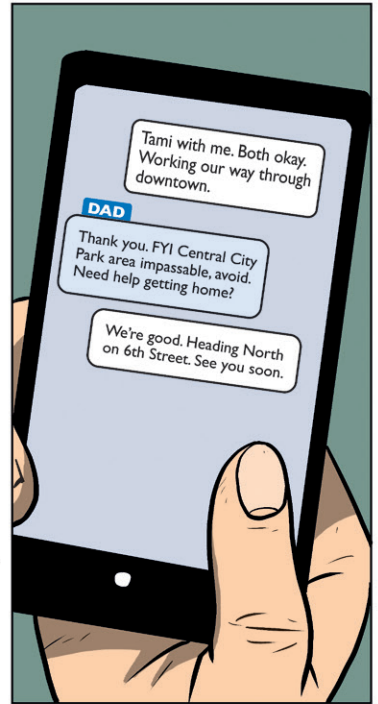






YOU DOING OKAY BACK THERE, BUG?

YUP!

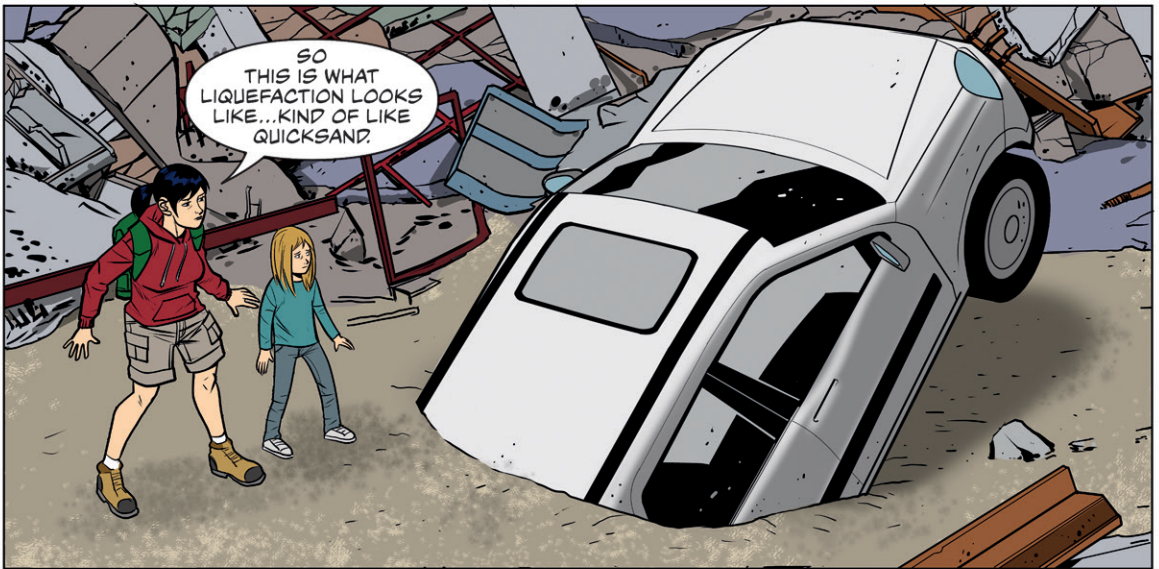


Tami with me. Both okay. Working our way through downtown.

DAD

Thank you. FYI Central City Park area impassable, avoid. Need help getting home!

We're good. Heading North on 6th Street. See you soon.



SO THIS IS WHAT LIQUEFACTION LOOKS LIKE...KIND OF LIKE QUICKSAND.



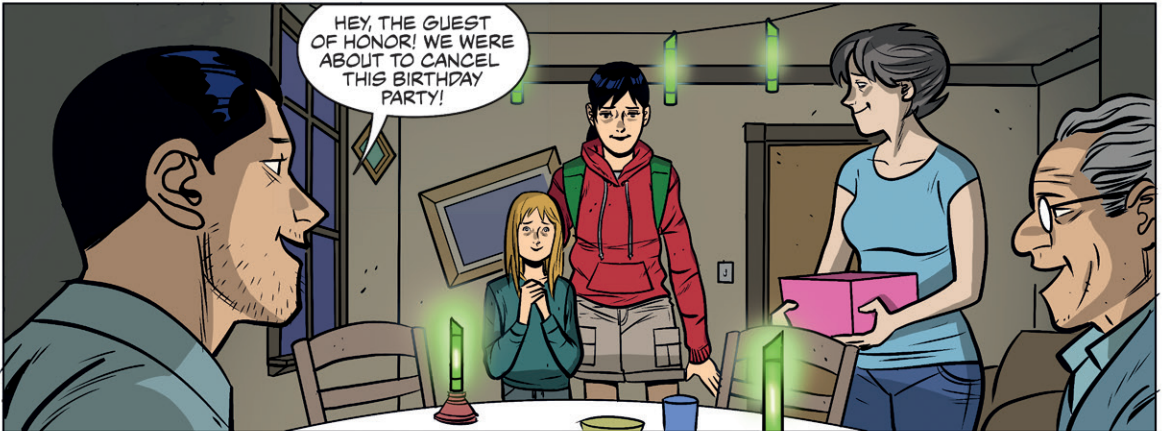
I HOPE SEAN AND HEATHER MADE IT ALL RIGHT...





ALMOST THERE. YOU DID GOOD.

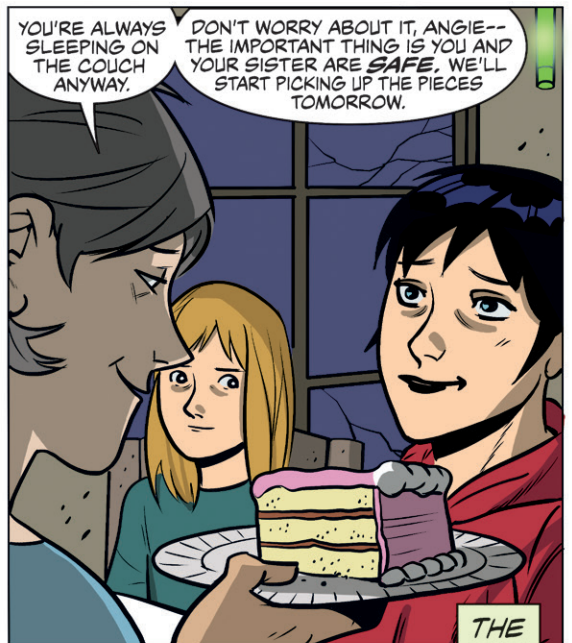
JUST LIKE WE PRACTICED!



HEY, THE GUEST OF HONOR! WE WERE ABOUT TO CANCEL THIS BIRTHDAY PARTY!



THAT TREE JUST BARELY MISSED MY BEDROOM, DIDN'T IT?



YOU'RE ALWAYS SLEEPING ON THE COUCH ANYWAY.

DON'T WORRY ABOUT IT, ANGIE-- THE IMPORTANT THING IS YOU AND YOUR SISTER ARE **SAFE**. WE'LL START PICKING UP THE PIECES TOMORROW.

THE END





# EARTHQUAKE PREPAREDNESS INFORMATION

## BEFORE THE EARTHQUAKE

- Visit [Ready.gov/make-a-plan](https://www.ready.gov/make-a-plan).
- Make a plan, and make sure everyone in your family knows it.
- Practice it together.
- Buy or assemble an emergency kit.
- Secure objects around your home, such as furniture or appliances, to prevent injury.
- Register and participate in the Great ShakeOut earthquake drill at [ShakeOut.org](https://www.shakeout.org).

## DURING THE EARTHQUAKE

- Drop, cover your head, and hold on.

## AFTER THE EARTHQUAKE

- Always follow your plan.
- Communicate with others around you.
- Have an out-of-state emergency contact saved and practice calling them.
- You may not be able to call across town, but out-of-state calls should go through. Texts often go through when calls don't, so text first, talk second.
- If you are near the coast or on a beach and feel an earthquake, move to safety on higher ground as fast as possible—a tsunami may be on the way.

You can do so many things to help keep your family and neighbors safe during and after an earthquake.

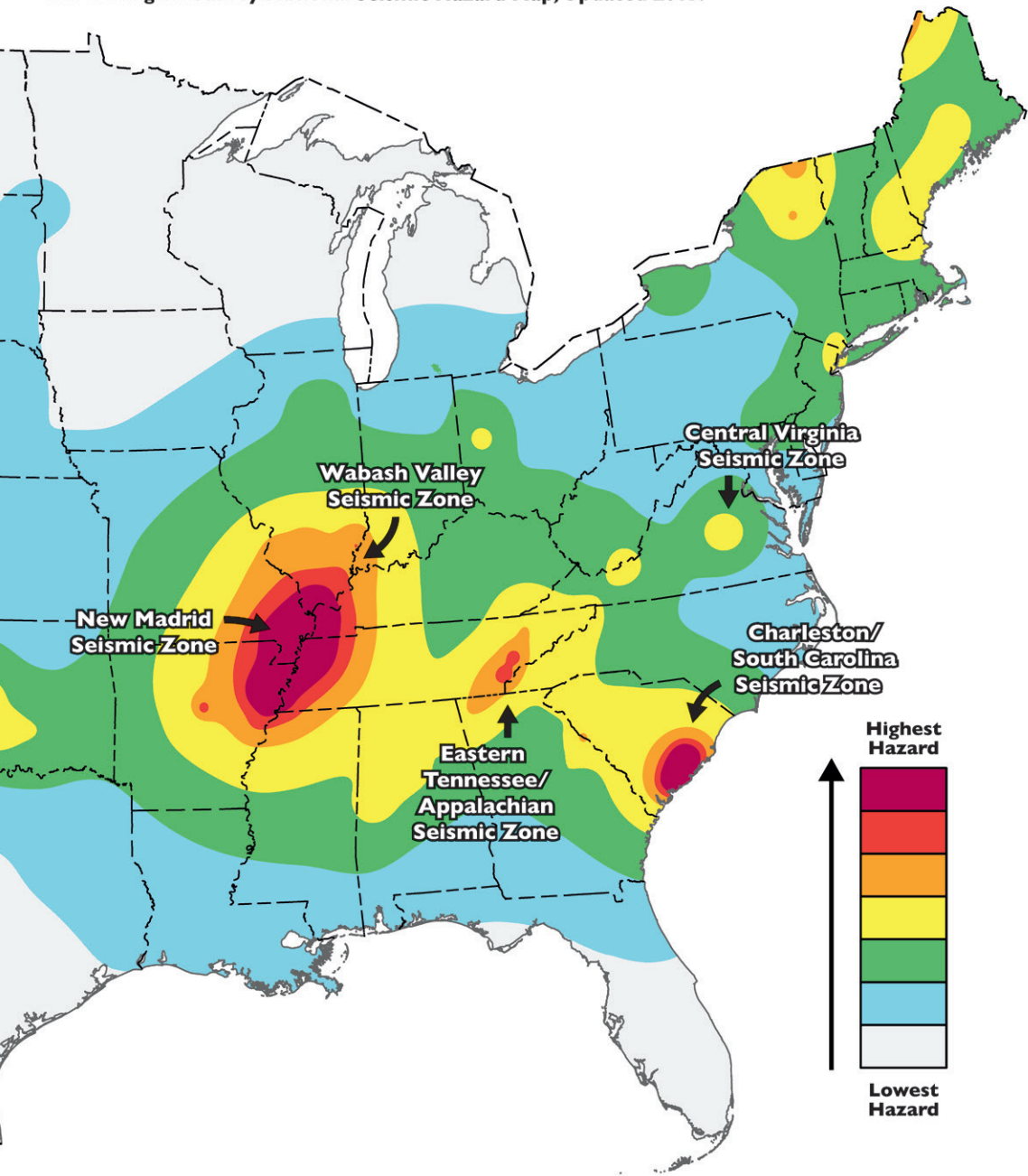
- Start a Teen CERT group at your school.
- Take a first-aid class.
- Organize your neighborhood.
- Ask your parents and teachers what their plans are and then practice with them.

## ADDITIONAL RESOURCES

- Visit [www.earthquakecountry.org/sevensteps](https://www.earthquakecountry.org/sevensteps) for more information on earthquake preparedness and safety.
- Visit [www.ready.gov/cert](https://www.ready.gov/cert) for more information on joining or starting a local Community Emergency Response Team (CERT).
- Visit [www.cusec.org/publications/preparedness/go-kit-passport.pdf](https://www.cusec.org/publications/preparedness/go-kit-passport.pdf) to download a booklet where you can keep important information you may need in the event of an emergency.



U.S. Geological Survey National Seismic Hazard Map, Updated 2018.



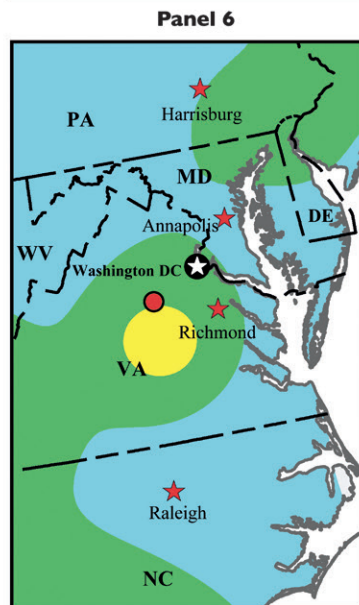
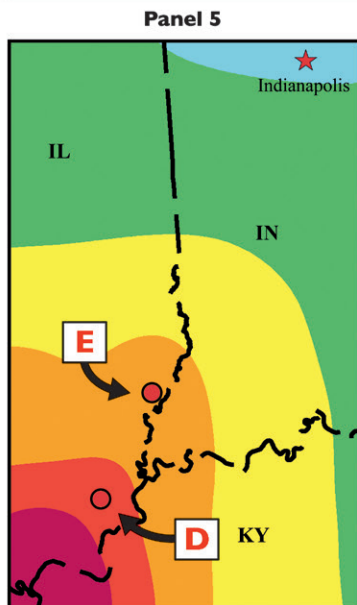
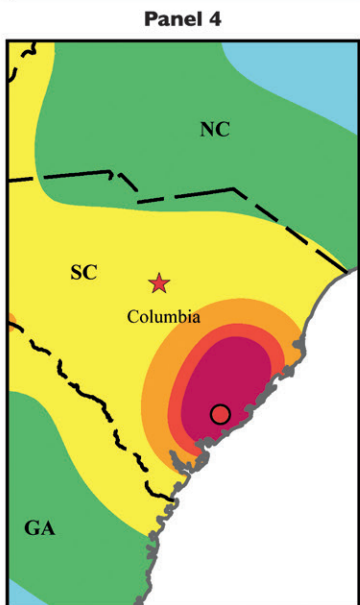
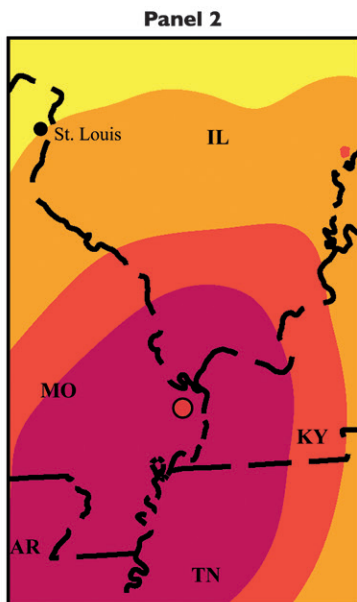
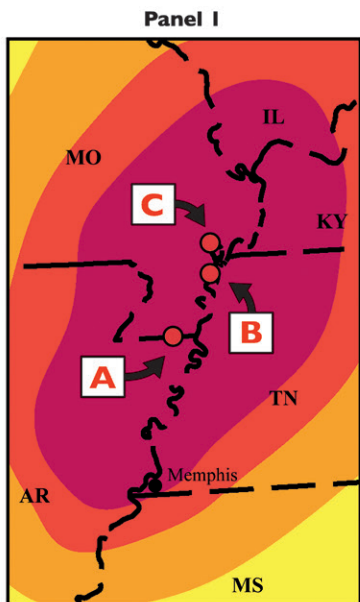
AN **EARTHQUAKE** IS CAUSED BY A SUDDEN SLIP ON A **FAULT** (FRACTURE OR ZONE OF FRACTURES BETWEEN TWO BLOCKS OF ROCK) BELOW THE SURFACE OF THE **EARTH**. SOME FAULTS ARE CLOSE TO THE SURFACE AND OTHERS ARE DEEPLY BURIED. EARTHQUAKES RELEASE ENERGY IN **WAVES** THAT TRAVEL THROUGH THE EARTH'S **CRUST**. THESE WAVES ARE THE ONES THAT CAUSE DAMAGE AND SHAKING FELT AT THE SURFACE. ENERGY RELEASED BY AN EARTHQUAKE BELOW THE SURFACE IS DESCRIBED AS **MAGNITUDE**. WHAT IS FELT AT THE SURFACE BY PEOPLE IS KNOWN AS **INTENSITY**. AN EARTHQUAKE HAS ONLY ONE MAGNITUDE, BUT THE INTENSITY FELT BY PEOPLE CAN VARY DEPENDING ON A NUMBER OF CONDITIONS.

**LIQUEFACTION** IS A PROCESS BY WHICH WATER-SATURATED SEDIMENT TEMPORARILY LOSES STRENGTH AND ACTS AS A FLUID, LIKE WHEN YOU WIGGLE YOUR TOES IN THE WET SAND NEAR THE WATER AT THE BEACH. THIS EFFECT CAN BE CAUSED BY EARTHQUAKE SHAKING.

MANY PEOPLE THINK EARTHQUAKES ONLY HAPPEN ON THE WEST COAST. THERE IS ALSO AN EARTHQUAKE HAZARD AND RISK EAST OF THE ROCKY MOUNTAINS. THERE ARE SEVERAL SEISMIC ZONES THAT HAVE, IN THE PAST, PRODUCED LARGE DAMAGING EARTHQUAKES. IF SIMILAR SIZED EARTHQUAKES WERE TO OCCUR TODAY THERE COULD BE WIDE SPREAD DAMAGE AND LOSSES.

FOR MORE INFORMATION ABOUT EARTHQUAKES, VISIT [earthquake.usgs.gov](http://earthquake.usgs.gov).





HERE, WE HIGHLIGHT THE FIVE MAJOR SEISMIC ZONES IN THE CENTRAL AND EASTERN U.S. WHERE SOME OF THE LARGEST EARTHQUAKES IN THE COUNTRY HAVE OCCURRED. LISTED BELOW ARE SOME SIGNIFICANT EARTHQUAKES THAT HAVE OCCURRED IN THE LAST SEVERAL HUNDRED YEARS. IN THE EARLY 1800S, SEVERAL VERY LARGE EARTHQUAKES STRUCK THE NEW MADRID SEISMIC ZONE, ALONG THE MISSISSIPPI RIVER VALLEY. IN 1886, A MAJOR EARTHQUAKE OCCURRED IN CHARLESTON, SOUTH CAROLINA, CAUSING CATASTROPHIC DAMAGE TO THE CITY OF CHARLESTON. DAMAGING EARTHQUAKES HAVE ALSO OCCURRED IN THE WABASH VALLEY, EAST TENNESSEE/APPALACHIAN, AND CENTRAL VIRGINIA SEISMIC ZONES. ALTHOUGH THEY DON'T HAPPEN VERY OFTEN, IT IS IMPORTANT THAT WE ARE PREPARED IN CASE A DAMAGING EARTHQUAKE STRIKES AGAIN. FOR MORE INFORMATION ON EARTHQUAKE HAZARDS AND PREPAREDNESS VISIT [www.cusec.org](http://www.cusec.org).

PANEL 1: NEW MADRID EARTHQUAKES OF 1811-1812

A) DECEMBER 12, 1811. MAGNITUDE 7.6

B) JANUARY 23, 1812. MAGNITUDE 7.3

C) FEBRUARY 7, 1812. MAGNITUDE 7.5

PANEL 2: CHARLESTON, MISSOURI EARTHQUAKE, OCTOBER 31, 1895. MAGNITUDE 6.6

PANEL 3: FORT PAYNE, ALABAMA EARTHQUAKE, APRIL 29, 2003. MAGNITUDE 4.6

PANEL 4: CHARLESTON, SOUTH CAROLINA EARTHQUAKE, SEPTEMBER 1, 1886. MAGNITUDE 7.0

PANEL 5: SOUTHERN ILLINOIS EARTHQUAKES

D) SOUTHERN ILLINOIS, NOVEMBER 9, 1968. MAGNITUDE 5.4

E) MOUNT CARMEL, ILLINOIS, APRIL 18, 2008. MAGNITUDE 5.2

PANEL 6: MINERAL, VIRGINIA EARTHQUAKE, AUGUST 23, 2011. MAGNITUDE 5.8





# RECOMMENDED SUPPLIES TO INCLUDE IN A BASIC EMERGENCY KIT:

- Water (one gallon of water per person, per day, for drinking and sanitation)
- Food (at least a three-day supply of nonperishable food)
- Can opener (if kit contains canned food)
- Prescribed medications
- Battery-powered radio and NOAA Weather Radio with tone alert, and extra batteries for both
- Flashlight and extra batteries
- First-aid kit
- Whistle to signal for help
- Infant formula and diapers (if you have an infant)
- Moist towelettes, garbage bags, and plastic ties for personal sanitation
- Dust mask or cotton T-shirt, to help filter the air
- Plastic sheeting and duct tape to create shelter
- Wrench or pliers to turn off utilities
- Important family documents, such as insurance policies, identification, and bank account records, in a waterproof portable container

This publication has been provided by the South Carolina Emergency Management Division. For more information on how to prepare for earthquakes and other disasters, visit <https://earthquake.sc>.

