

# FLOOD SAFETY AWARENESS WEEK

Spring 2007

## Flood Safety Awareness Week is March 19-23 2007

Governor Jon Huntsman, Jr. has declared March 19-23 as Flood Safety Awareness Week in Utah, in conjunction with National Flood Safety Awareness Week. The Utah Department of Public Safety, Utah Department of Transportation, the four Utah chapters of the American Red Cross, Utah State Parks and Recreation, and the Utah State Board of Education will assist in the campaign effort led by National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service (NWS).

Flooding, while a simple word, conjures images to all. To some, it may be a record flood, such as the Santa Clara River flooding in St. George or the flooding which occurred across southeast Utah last fall. To others, it may be a rush of water in a desert wash that almost swept their car and them away. Floods come in all shapes and sizes and can arrive without a moment's notice or with a slow creep. Regardless of how they come, floods over the long term kill more people in the United States than any other type of severe weather.

The goals of the campaign are to educate the citizens of Utah on hazards associated with floods and flash floods as well as what can be done to save lives and protect property. Daily news releases and statements will be issued and broadcast on NOAA Weather Radio during the week. Hydrologists and Public Information Officers serving your area will be available for interviews and questions.

## Flash Flood Safety in Slot Canyons

July 27, 1998, two hikers drown in the Zion Narrows during a flash flood. Just over six years later, two fatigued hiking parties emerge from the Paria River drainage, after spending over 24 hours perched on ledges above the Paria River. A quote from the Wire Pass trailhead log states "Holy...almost drowned." Fortunately, all involved in the September flash flood event escaped without harm.

Do you know how to protect yourself and your loved ones when entering slot canyons and rugged terrain? (Continued on Page 2)



Check out the National Flood Safety Awareness Week web site at  
<http://www.floodsafety.noaa.gov>

A full color version of this publication is available on-line at  
<http://www.wrh.noaa.gov/slc/wxsafety>

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## Flash Flood Safety in Slot Canyons...continued

Here are the basics:

### Dos

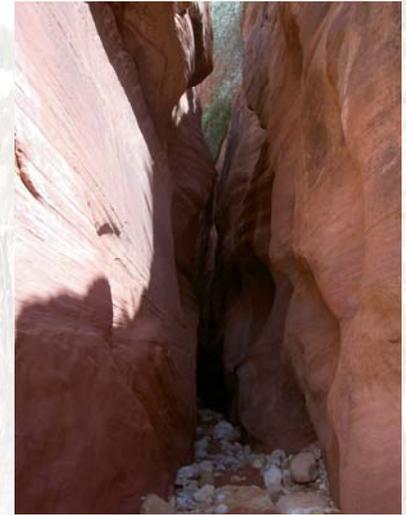
- **Check** in at visitor centers/contact stations and obtain permits
- *Check in before hiking out!*
- **Get** the latest weather information
- **Become** familiar with the terrain and know your escape routes
- **Be aware** that deadly flash flood waters can travel from many miles away with travel times of 10 hours or more

*Clear skies do not guarantee dry slot canyons!*

- **Always** let someone know your itinerary

### Don'ts

- **Don't** enter slot canyons and rugged terrain during stormy or wet weather
- **Don't** attempt to cross floodwaters by vehicle or on foot
- **Don't** camp along streams and washes if there is a threat of flooding



## Flash Flood Potential Rating

To bridge the gap between outlook products and flash flood watches/warnings, the National Weather Service (NWS) Salt Lake City office produces a product called the Flash Flood Potential Rating (FFPR). The FFPR is issued twice daily during the Summer and Fall seasons, roughly from mid May to late October, under the identifier of SLCRVASLC, WMO Header SRUS45. The FFPR provides a qualitative rating, indicative of the potential for flash flooding over the next two days for two areas...Southwest Utah and Southeast Utah. The rating categories are...

**Low** - Generally indicates that the risk of flash flooding is minimal or does not exist.

**Moderate** - Indicates that thunderstorms will be developing and isolated incidents of flash flooding are possible.

**High** - Used when scattered thunderstorms with areas of heavy rain are expected and flash flood possibilities are more widespread.

**Very High** - With this rating, meteorological conditions are conducive for significant probabilities of flash flooding over a widespread area. The "Very High" rating is rarely assigned.

The southwest Utah area includes Zion and Bryce Canyon National Parks, Cedar Breaks and Grand Staircase-Escalante National Monuments, plus surrounding areas. The southeast Utah area includes, Capital Reef, Canyonlands, and Arches National Parks, as well as Natural Bridges National Monument, The Glen Canyon National Recreation Area, and surrounding areas.

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## Terms and Definitions...What To Listen For

**Flash flood** - A rapid (generally within six hours) rise of water along a stream or low-lying area after a heavy rainfall or from the failure of a dam, levee, or ice jam. By definition, flash flooding is life-threatening.

**Flood** - A flood occurs when water overflows the confines of a river, stream, or body of water, or accumulates in poorly drained low-lying or urban areas.

**Hazardous Weather Outlook/Special Weather Statement** - A Hazardous Weather Outlook/Special Weather Statement will be issued to alert the public of the potential for flooding/flash flooding.

These products provide information on potentially hazardous weather out to 7 days.

**Flash Flood Potential Rating** - A qualitative rating (Low, Moderate, High, or Very High), indicative of the potential for flash flooding.

**Flash Flood Watch** - Issued when conditions are favorable for flash flooding. A watch usually gives 12 to 36 hours advance notice of the onset. A watch indicates a need for planning, preparation, and an increased awareness of changing weather conditions.

**Flood Watch** - Issued when conditions are favorable for river flooding. A watch usually gives 12 to 36 hours advance notice of the onset.

**Flash Flood Warning** - Issued when:

- Flash flooding is reported or imminent
- A dam or levee failure is imminent or occurring
- A sudden failure of a naturally-caused stream obstruction (including debris slide, avalanche, or ice jam) is imminent or occurring
- Precipitation capable of causing flash flooding is indicated by radar, rain gages, and/or satellite imagery.
- Local monitoring and prediction tools indicate flash flooding is likely

**Flood Warning** - Issued for flooding along rivers and streams. A warning indicates the need to take immediate action to protect life and property. The two categories of flood warnings are:

- Point Specific Flooding Warning - Issued for specific river forecast points
- Areal Flood Warning - Issued for a generalized area

## NOAA Weather Radio...Voice of the National Weather Service

Keep ahead of severe weather by listening to NOAA Weather Radio for the latest outlooks, watches and warnings. In addition to routine broadcasts, the Specific Area Message Encoding (SAME) feature of NOAA Weather Radio activates the Emergency Alert System (EAS). EAS is used to provide notification of emergencies to the public.

**For more information, including links to NOAA Weather Radio transmitters in your area, visit the NOAA Weather Radio Web Site at <http://www.nws.noaa.gov/nwr>.**

**For special needs NOAA Weather Radio information, visit <http://www.nssl.noaa.gov/~wood/NWR/spc-nds-nwr>.**

### Did You Know?

*Special needs NOAA Weather Radios designed to meet the needs of the deaf and hard-of-hearing are available.*

## Flood/Flash Flood Facts

- Average of more than 140 fatalities each year, nationwide
- 29 fatalities in Utah since 1950
- Number one cause of deaths associated with thunderstorms, nationwide
- Flooding causes more damage in the United States than any other weather related event, an average of \$4.6 billion a year
- Nearly half of all flash flood fatalities are vehicle-related
- Six inches of fast-moving water can knock you off your feet
- A water depth of two feet will cause most vehicles to float

## Did You Know?

*The temperature of spring snow-melt runoff water is just over freezing. If in the water, hypothermia will set in and within 2 minutes the ability to pull yourself from the water will be lost.*

## Flood/Flash Flood Safety

- Monitor NOAA Weather Radio, or your favorite news source for vital weather information before venturing into flood prone areas
- If flooding occurs, move to higher ground, away from areas subject to flooding such as dips in roads, low spots, canyons, and washes
- Avoid areas already flooded and do not attempt to cross flowing streams
- Do not drive around barriers that warn you the road is flooded...Turn Around, Don't Drown
- Never drive through flooded roadways, as the road bed under the flood waters may be washed out
- Never allow children to play around high water, storm drains, viaducts, or arroyos
- Do not camp or park your vehicle along streams and washes, if there is a threat of flooding
- Be especially cautious at night when it is harder to recognize flood dangers

## Flood/Flash Flood Preparedness

Now is the time to prepare your home and family for flooding. What you do now could not only save your home, but also your life and the lives of your family. For assistance in preparedness, visit the American Red Cross Flood and Flash Flood page at [http://www.redcross.org/services/disaster/0,1082,0\\_585\\_00.html](http://www.redcross.org/services/disaster/0,1082,0_585_00.html).

## Flash Flood Potential Rating...continued

The FFPR, along with outlooks, flood watches, and forecasts from the NWS, should be used as a planning tool before venturing into slot canyons and washes. A “best practice” from Zion National Park is that the FFPR is stamped onto the back of each backcountry pass. Forecast information is also posted at the Visitors Center.

To view the FFPR product during the issuance season, go to <http://www.wrh.noaa.gov/slc/river> and click on the “Flash Flood Potential” link.

## Advanced Hydrologic Prediction Service

The Advanced Hydrologic Prediction Service (AHPS) is an ongoing effort by NOAA's NWS to modernize hydrologic services. AHPS, coined "Water Predictions for Life's Decisions", provides improved river and flood forecasts, as well as water information for locations across America, to protect life and property and ensure the Nation's economic well-being. AHPS graphical products are available at the NWS homepage at [http://www.nws.noaa.gov/rivers\\_tab.php](http://www.nws.noaa.gov/rivers_tab.php).

Everyone who makes decisions based on water benefits from AHPS, including farmers, river boat pilots, emergency managers, municipal water supply officials, recreationists, and dam operators. AHPS will help emergency managers be more proactive in "fighting" a flood. AHPS provides information for community leaders and business owners to make better life-saving decisions about evacuating people or moving property before a flood. The navigation community will be able to plan with better confidence in efforts to optimize barge and shipping operations, saving millions of dollars each year. Recreational users can use AHPS to keep them out of harm's way.

AHPS, with its suite of enhanced information, provides the public with more detailed and accurate answers to the following questions.

- How high will the river rise?
- When will the river reach its peak?
- Where will the flooding occur?
- How long will the flood last?

Additional information on the AHPS system is available at [http://www.nws.noaa.gov/rivers\\_tab.php](http://www.nws.noaa.gov/rivers_tab.php).



## TURN AROUND, DON'T DROWN

Each year, more deaths occur due to flooding than from any other thunderstorm related hazard. Why? The main reason is people underestimate the force and power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around the barriers that warn the road is flooded.



Whether you are driving or walking, if you come to a flooded road, **Turn Around, Don't Drown**. You will not know the depth of the water, nor will you know the condition of the road under the water.

To learn more about the dangers of floods and flash floods and how to protect yourself and your loved ones, visit the **Turn Around, Don't Drown** web page at <http://www.nws.noaa.gov/os/water/tadd>.

## Wanted: Weather Spotters

Spotter reports improve warning efficiency and accuracy, in addition to heightening public awareness when "ground truth" reports are included in warnings. We need your help! To locate or request a SKYWARN (spotter) training session near you, contact your local NOAA's NWS Office. For more information, check out the National Weather Service Salt Lake City Weather Spotter page at [http://www.wrh.noaa.gov/slc/spotter/spotter\\_home.php](http://www.wrh.noaa.gov/slc/spotter/spotter_home.php).



## Special Needs Preparedness

Floods are always a threat in Utah, whether flash flooding from heavy rains or slow-rising floods from spring runoff. Everyone should be prepared for these emergency situations, but persons with disabilities have additional needs to consider. Everyone should start emergency preparedness by following these four basic steps:

- Get informed
- Make a plan
- Assemble a kit
- Maintain your plan & kit

Persons with disabilities should keep the following considerations in mind:

- Register with the State of Utah Special Needs Registry: Register online at [www.specialneedsutah.org](http://www.specialneedsutah.org) or Dial 211 from any phone and sign up. This free service allows emergency response personnel to locate persons with special/medically sensitive needs quickly during times of crisis, such as floods and other disasters.
- Consider getting a medical alert system: These systems allow you to call for help if you are immobilized or stranded during an emergency
- Have a manual wheelchair for backup: If you use an electric wheelchair or scooter, be sure to have a manual wheelchair for easier evacuation and better mobility in temporary shelters.
- Inform personal attendants and loved ones about your medical equipment: Let those who might be helping you in an emergency know how to work medical and other necessary equipment.
- Arrange for more than one person to check on you: Floods and other disasters quickly cut off people from one another. Make sure someone nearby is able and willing to assist you in the event of such an emergency.
- Plan ahead for someone to assist you with communications: If you are vision-impaired, deaf or hard of hearing, arrange for someone to relay critical information to you, such as evacuation procedures and the location of suitable shelter sites.
- Learn about home care help services during an emergency: If possible, arrange for personal care attendants to accompany you during evacuations and remain with you in appropriate temporary shelters or alternative housing.
- Have a cell phone with an extra battery: If you are stranded by flooding or rising waters, be prepared to contact someone for help. Maintain a list of alternate emergency contact numbers in case the 911 system is overloaded.
- **Most important of all**, have backup plans for any specialized vehicle or equipment that may not be available during a crisis.

**For more information on special needs preparedness, check out the following web sites:**

**[http://www.redcross.org/services/prepare/0,1082,0\\_239\\_00.html](http://www.redcross.org/services/prepare/0,1082,0_239_00.html),**

**<http://www.ready.gov/america/getakit/disabled.html>, and**

**<http://www.disabilitypreparedness.gov/>.**

**For information on animals in disasters, visit The Humane Society of the United States web site at [http://www.hsus.org/hsus\\_field/hsus\\_disaster\\_center/index.html](http://www.hsus.org/hsus_field/hsus_disaster_center/index.html).**

## Internet Sites

National Oceanic and Atmospheric Administration (NOAA)

<http://www.noaa.gov>



National Weather Service

<http://www.nws.noaa.gov>

Utah Department of Public Safety, Division of Homeland Security

<http://homelandsecurity.utah.gov>



National Flood Safety Awareness Week Web Site

<http://www.floodsafety.noaa.gov>

Turn Around Don't Drown Web Page

<http://www.nws.noaa.gov/os/water/tadd>

National Weather Service Salt Lake City, UT

<http://www.wrh.noaa.gov/slc> or

<http://www.weather.gov/saltlakecity>

National Weather Service Grand Junction, CO

<http://www.crh.noaa.gov/gjt> or

<http://www.weather.gov/gjt>

NWS Office of Climate, Water and Weather Services

<http://www.nws.noaa.gov/om/flood>

### National Weather Service Salt Lake City

2242 West North Temple  
Salt Lake City, UT 84116  
801-524-5133

Federal Emergency Management Agency

<http://www.fema.gov/fima>



American Red Cross

<http://www.redcross.org/services>

Be Ready Utah Campaign

<http://beready.utah.gov>



Utah State Parks and Recreation

<http://www.stateparks.utah.gov>

NOAA Weather Radio

<http://www.nws.noaa.gov/nwr>

Climate Prediction Center

<http://www.cpc.noaa.gov>

Utah Department of Transportation

<http://www.udot.utah.gov>

CommuterLink

<http://www.commuterlink.utah.gov>

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