

# Watch Out...



# FLOODS AHEAD!

**OWLIE SKYWARN'S WEATHER BOOK**



FEMA



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# Floods and Flash Floods

***Flash floods are fast moving water that can sweep you or your car away in seconds.***



Floods are too much water on normally dry land. Rivers can flood after heavy rain has fallen over a long period of time. River flooding can last weeks or longer. River floods usually occur slowly enough to allow people and property to move to safety.

Flooding can occur anytime of the year. Some floods are seasonal, when winter or spring rains combine with melting snows and fill rivers with too much water too quickly. Other floods are associated with land-falling hurricanes and tropical storms in the summer and fall.

Whenever it rains heavily, there may be flash floods. Flash floods occur in mountain streams, canyons or dry washes. They also happen on low spots in cities and suburbs.

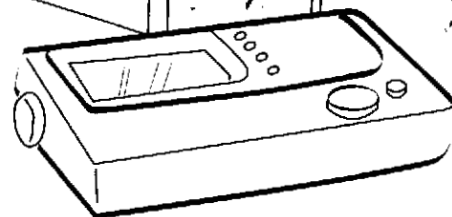
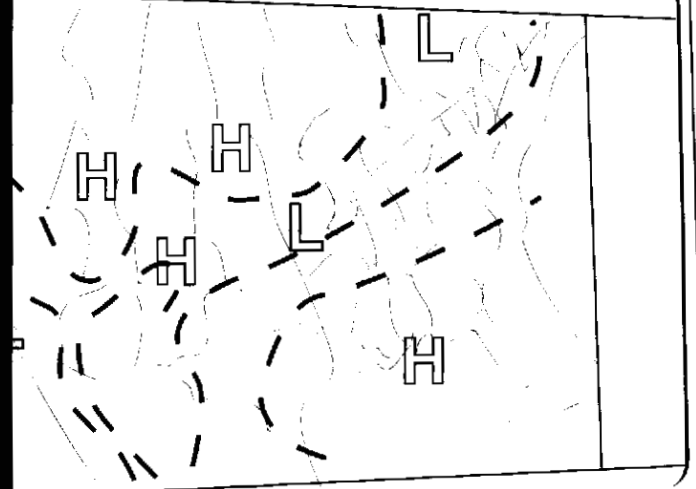
Flash floods can occur even though it's not raining where you are. It may be raining hard upstream, so hard, water cannot sink into the ground. Water rushes down to the stream which fills up past its banks and overflows.

A flash flood may come at you like a high wave of water. To save yourself and your parents, you need a plan.

# Flash Flood Warning

When you hear a "Flash Flood Warning" on the radio or TV, there is flooding right NOW. Get away from low-lying roads and other low spots NOW. Seconds count.

Keep your eye on streams to see if water is rising. If streams rise, get out fast. Go to higher ground.



# Stay Calm

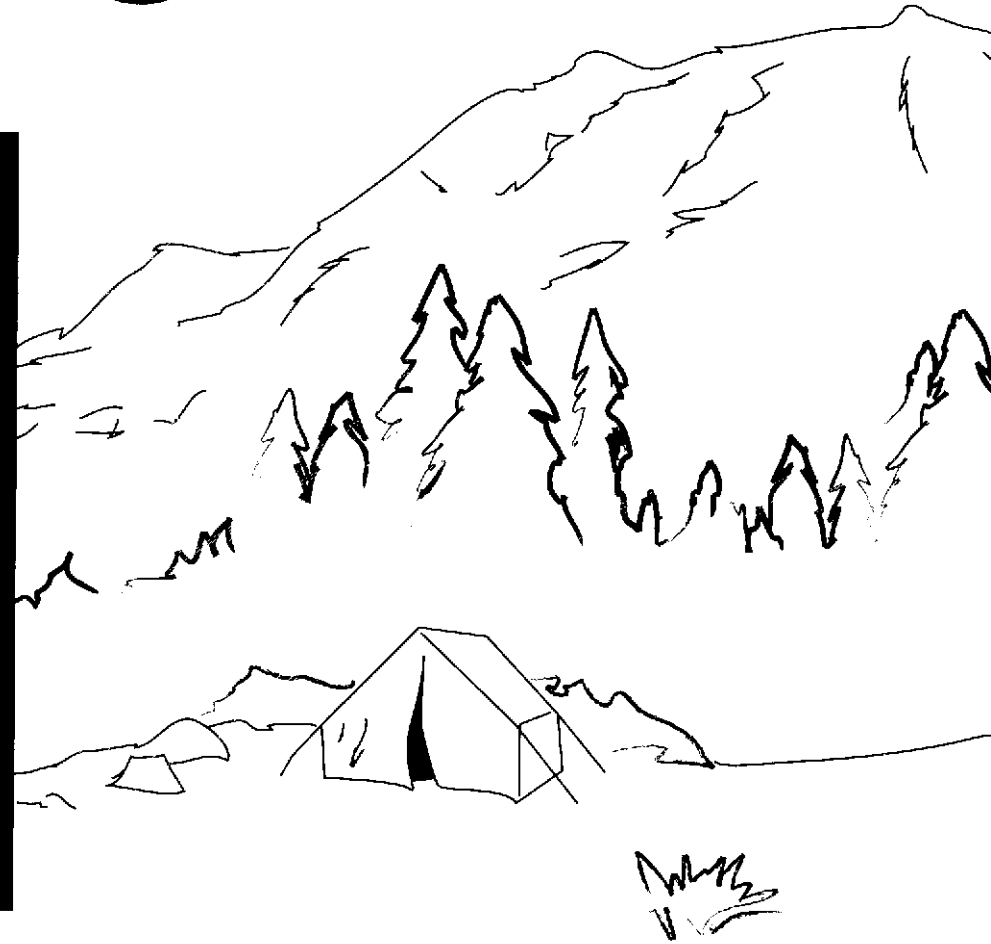
Move to higher ground—leave everything and run. A flash flood can pick up cars, campers, vans, recreational vehicles and roll them downstream. It can tumble huge boulders, uproot trees and carry them, wash out roads and tumble bridges like matchsticks.

## Campers

- If the weather forecast is for heavy rain, stay home.
- If you already have set up camp, stay alert. Listen to local stations on your battery powered radio.
- Watch for signs of rain—not only where you are—but upstream.
- Plan ahead. Pick high ground for your camp. Also know how to get to even higher ground in an emergency. Check your escape route to make sure it's passable.
- Remember, seconds count. Flash floods move with lightning speed!

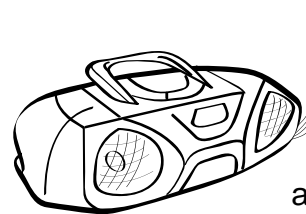
## When You Are Outside

- Keep out of storm drains, irrigation ditches, dry washes or other waterways. When it rains, the water can rush through too fast for you to escape.
- There will probably be heavy lightning. Go to higher ground, but stay off hilltops.
- Don't get under lone trees. Follow lightning safety guidelines.



# In a Car or Truck

- Watch for flooding on bridges and low points in the road.
- Stay off bridges or roads under water. All of a sudden the bridge or the road could be washed out. They may not even be there under the water.
- If you are in a car, truck or other vehicle and become washed away by water, get out and swim to higher ground if you can.
- If you're riding in a car at night, be specially careful. If you drive into deep water, get out of your car. Climb to higher ground.
- If you're driving through canyon country along a stream and hear a Flash Flood Warning, leave your car and climb to higher ground. Don't try to outrun the flash flood.



In areas with frequent flash floods, keep a battery operated radio with you. Tune

to a local station or stay tuned to NOAA Weather Radio. The flood may get worse. Keep away from streams and rivers.

# Flash Flood Quiz

Fill in the blank with the correct word. Use these words:

streams  
flash flood  
bridges

ground  
roads  
car

1. A flash flood can wash out \_\_\_\_\_ and bridges.
2. A \_\_\_\_\_ may come to you as a high wave of water.
3. If it is raining hard, water cannot sink into the \_\_\_\_\_.
4. Flash floods most often occur in mountain \_\_\_\_\_.
5. If you are driving in deep water, get out of your \_\_\_\_\_ and climb to higher ground.
6. If you are driving in heavy rain, watch for flooding at \_\_\_\_\_ and low points in the road.



Circle T (true) or F (false) for each sentence below.

- T F 1. When you hear a flash flood warning it means there will be a flood within 24 hours.
- T F 2. Flash floods usually occur along beaches.
- T F 3. If you are camping and a flash flood occurs, run to higher ground.
- T F 4. Along with flash floods, there is often heavy lightning.
- T F 5. Drive as fast as possible through a flooded road to avoid being washed downstream.
- T F 6. Never try to outrun a flash flood.
- T F 7. If you are camping and you hear a flash flood warning, pack up your tent and bring all your camping gear so it will not be damaged by the flood.
- T F 8. A flash flood can wash out roads and bridges and uproot trees.
- T F 9. The National Weather Service will always warn you if a flash flood is expected.
- T F 10. Whenever it rains heavily, there may be flash floods.

What should campers do if heavy rains are expected?

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# Answers

## flash flood quiz (pg 32)

1. roads, 2. flash flood, 3. ground, 4. streams, 5. car  
6. bridges -- 1. T, 2. F, 3. T, 4. T, 5. F, 6. F, 7. F, 8. T,  
9. F, 10. T

## tornado quiz (pg 31)

1. tornado, 2. funnel and top, 3. black clouds, 4.  
watch, 5. warning, 6. train, 7. ditch, 8. basement, 9.  
hail, 10. bathroom, 11. windows, 12. mobile home, 13.  
sky, 14. radio -- 1. T, 2. F, 3. T, 4. T, 5. T, 6. F, 7. F, 8.  
T, 9. T, 10. F

## crossword puzzle (pgs 37-38)

### Answers: (Across)

4. Electricity, 6. Wind Chill, 7. Summer, 8. Floods  
14. Thunder, 15. Weather, 16. Hail, 17. Funnel

### Answers: (Down)

1. Forecasts, 2. Radio, 3. Eye, 5. Tornado, 7.  
Snowstorms, 9. Lightning, 10. Surge, 11. Shortest,  
12. Warning, 13. Hurricane

## hazards (pg 35)

1. Tornado, 2. hurricane, 3. hurricane, lightning and  
tornado, 4. winter storm and lightning, 5. flash  
flood, 6. lightning, 7. hurricane, lightning, winter  
storm, and tornado, 8. hurricane, tornado, and win-  
ter storm, 9. hurricane, tornado, winter storm and  
flash flood, 10. tornado

## true & false (pg 36)

1. F-lightning, 2. T, 3. F-Flooding,  
4. F, 5. F-anywhere, 6. F, 7. T, 8. F, 9. T, 10. F

## winter storm quiz (pg 30)

1. watch, 2. warning, 3. kitty litter, 4. antenna, 5.  
carbon monoxide, 6. layers, 7. mittens, 8. winter,  
9. wind chill, 10. snowdrift -- 1. T, 2. F, 3. T, 4. F, 5.  
F, 6. T, 7. T, 8. T, 9. F, 10. F

## lightning quiz (pg 29)

1. die, 2. telephone, 3. thunder, 4. explode, 5.  
tallest, 6. shortest, 7. electricity, 8. tree, 9. fire,  
10. water -- 1. F, 2. T, 3. F, 4. T, 5. F, 6. F, 7. T, 8.  
F, 9. F, 10. T

## hurricane quiz (pg 33)

1. air, 2. moving, 3. oceans, 4. hurricanes,  
5. high tides and flooding, 6. watch,  
7. warning, 8. radio, 9. inland, 10. eye --  
1. F, 2. T, 3. F, 4. F, 5. T, 6. F, 7. T, 8. F, 9. F, 10. T

## fill in the blanks (pg 34)

1. Tornado, 2. tornado, 3. lightning, 4. winter  
storm, 5. flash flood, 6. hurricane, 7. hurricane,  
8. tornado, 9. hurricane, 10. tornado.