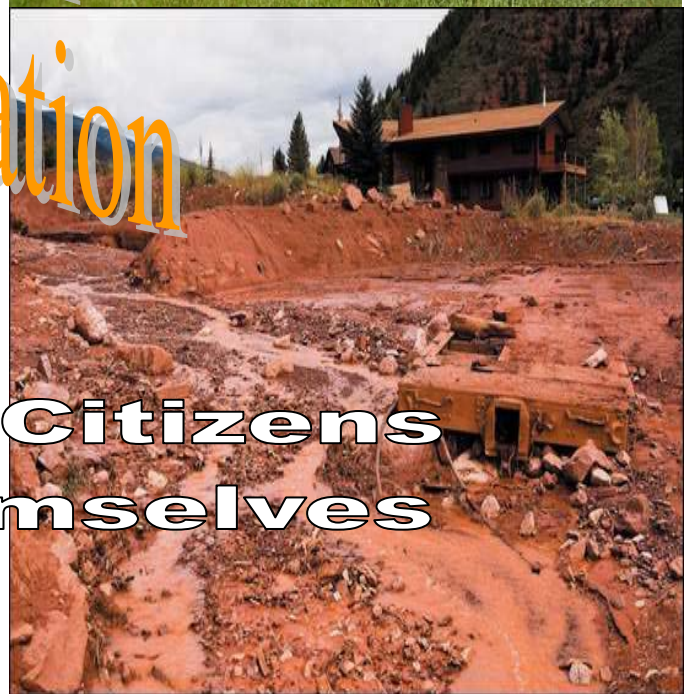




High Water Preparedness Information



Helping our Citizens to help themselves

Town of Carbondale, City of Glenwood Springs, Town of New Castle, Town of Silt, City of Rifle, Town of Parachute, and Garfield County

May 2011

To Resident, Business Owners and Visitors of Garfield County

In Colorado, there are two distinct types of flooding.

The first type occurs when the snow begins to melt in the high country and rivers begin to rise. Flooding along rivers and streams can occur with a very rapid snow melt, or from thunderstorm rains combining with the runoff from melting snow.

The second type of flooding, flash flooding refers to a dangerous sudden rise in water along a creek, wash, river, or over a normally dry land area. Flash floods can occur at any time during the year and are a result of heavy rainfall, sudden breaks in river ice jams, and dam or levee failures. Flash floods can occur within a few minutes or hours, and can move at surprisingly high speeds, striking with little warning. Flash floods are quite destructive because of the force of the moving water, and the debris that accumulates in flood waters, such as trees and boulders, which can destroy roadways, bridges and buildings.

The most significant impacts of flooding and the ones that we want to concentrate our efforts on are threats to life and damage to structures.

Maps from FIRM (Flood Insurance Rate Map) to assist you in locating your property and evaluating its proximity to the 100-year flood areas for the Colorado River are available on-line at <http://www.garfield-county.com/geographic-information-systems/colorado-river-floodplain.aspx> and the Roaring Fork River are available at <http://www.garfield-county.com/geographic-information-systems/roaring-fork-flood-plain.aspx> or you may call the planning department in your town or the county for information on your property.

Please visit the USGS site;

http://water.usgs.gov/cgi-bin/waterwatch?state=co&map_type=real&web_type=map to monitor the flow (CFS- cubic feet per second) in area creeks and rivers and for other information as the spring melt situation unfolds.

In the event of significant flooding anywhere in the county, Garfield County will activate an Emergency Operations Center and emergency management agencies in the county will coordinate and assist in the response and recovery efforts.

On behalf of the Town of Carbondale, City of Glenwood Springs, Town of New Castle, Town of Silt, City of Rifle, Town of Parachute, and Garfield County Government, thank you for your cooperation and concern.

HIGH WATER ACTION PLAN: PUBLIC WORKS

WHAT CAN YOU EXPECT FROM PUBLIC WORKS?

Primary Responsibilities of Public Works Staff:

- Monitoring rivers and streams in the county.
- Removing debris which might impede the flow of water in creeks and culverts in public right-of-way.
- Evaluating levels of flooding and/or anticipated flood threat and determining needs.
- Providing up-to-date estimates about flooding potential and anticipated areas.
- Establishing priorities for the protection of life safety, essential facilities, access roads, bridge structures and culverts.
- **Providing sandbags to area residents and businesses.**

HIGH WATER ACTION PLAN: EMERGENCY MANAGEMENT

Primary Responsibilities of Emergency Management:

- Identify actual affected areas
 - Life threatening potential
 - Need to evacuate
 - Shelter
 - Food and water
 - Temporary housing
 - Sanitation facilities
 - Secure affected area
 - Traffic
 - Crowds
 - Establish and secure access to affected area
- Warn and advise the population
 - Media
 - Emergency Preparedness Network (911 call back)
 - Emergency Alert System
 - ECAAlert
- Coordinate use of personnel and other resources
 - Logistics
 - Command Center
 - Communications system
 - Assistance from local agencies
 - Assistance from state agencies

HIGH WATER ACTION PLAN: FIRE/EMERGENCY MEDICAL SERVICES

WHAT CAN YOU EXPECT FROM Fire & EMS?

Primary Responsibilities of Fire & EMS Staff:

- Monitoring rivers and streams in the county.
- Rescue of persons trapped by flood waters.
- Evaluating levels of flooding and/or anticipated flood threat and determining needs.
- **Providing EMERGENCY sandbagging assistance to area residents and businesses.**

HIGH WATER ACTION PLAN: LAW ENFORCEMENT

WHAT WILL THE GARFIELD COUNTY SHERIFF'S OFFICE AND LOCAL LAW ENFORCEMENT DO IN THE EVENT OF A HIGH WATER SITUATION?

Duties of LAW ENFORCEMENT:

- Protect life (health and well-being of the community)
- Continue to provide essential police services

Priorities:

- Evaluate the threat level
 - 24 Hour stream watch during peak run-off period**
 - Communication with affected agencies
- Secure property impacted by flooding
 - Public property (local government infrastructure)
 - Private property - prevent looting
- Continue to provide essential police services
 - Prioritize police response to requests for service
 - Additional manpower and other resources from local agencies

HOW TO CONSTRUCT A SANDBAG LEVEE

HOW TO FILL SANDBAGS

Fill sandbags 1/2 to 2/3 full, tie at top so bag will lay flat when put in place. (Overfilled bags leave gaps in levee allowing water to seep through.)

RIGHT



1/2 Full

Weight
35-40 lbs.

WRONG



Full

Weight
70-75 lbs.

WRONG



Tied too
low
1/2 Full

PLACING SANDBAGS

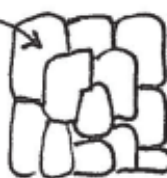
Sandbags should be placed flat on ground, overlapped, tamped into place, and stairstepped.

RIGHT
ELEVATION



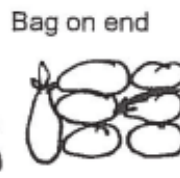
Overlapped

PLAN



WRONG

ELEVATION



Bag on end

Gaps

PLAN

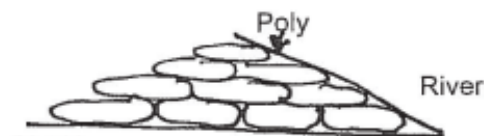
Not overlapped



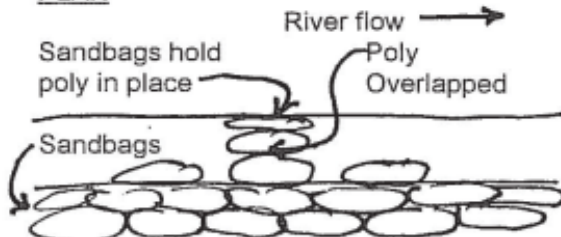
POLYETHYLENE

Polyethylene (poly) comes in rolls 20 ft. wide and 100 ft. long. It's used to wrap sandbag levees to prevent seepage. Poly should be placed on downstream portion of levee first, then worked upstream with a two to three-foot overlap. Poly is held in place with sandbags.

ELEVATION



PLAN

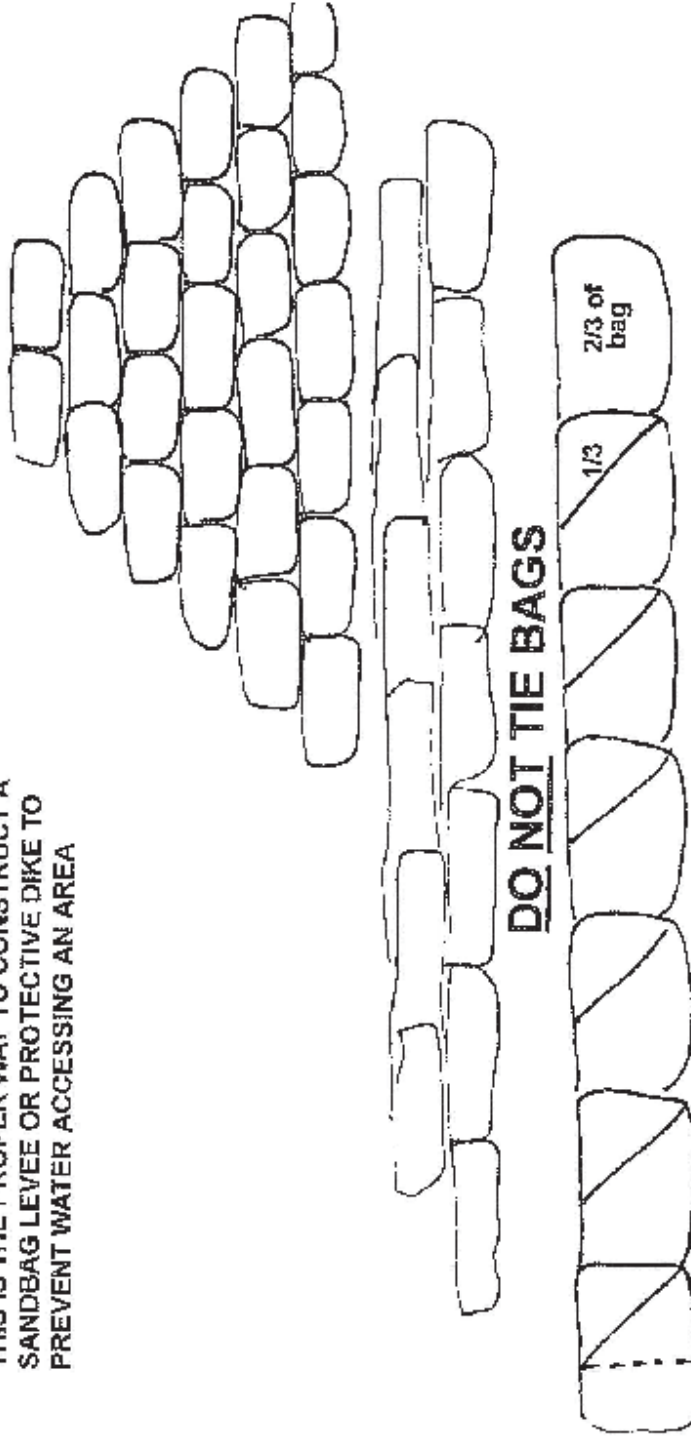


Estimated number of sandbags per
linear foot of wall.

<u>Height in Feet</u>	<u>Bags Required</u>
1	5
2	10
3	21
4	36
5	55

Five feet is the practical limit of sandbag levee. If a higher levee is needed, alternate means of construction should be considered. Note: Preferred levee limit is three feet high.

**THIS IS THE PROPER WAY TO CONSTRUCT A
SANDBAG LEVEE OR PROTECTIVE DIKE TO
PREVENT WATER ACCESSING AN AREA**



Only fill bags 1/2 to 2/3 full - note the lap made by the excess material - fold it diagonally in half and walk right down the top of the bags to compact. Each additional row ties the lower ones in.

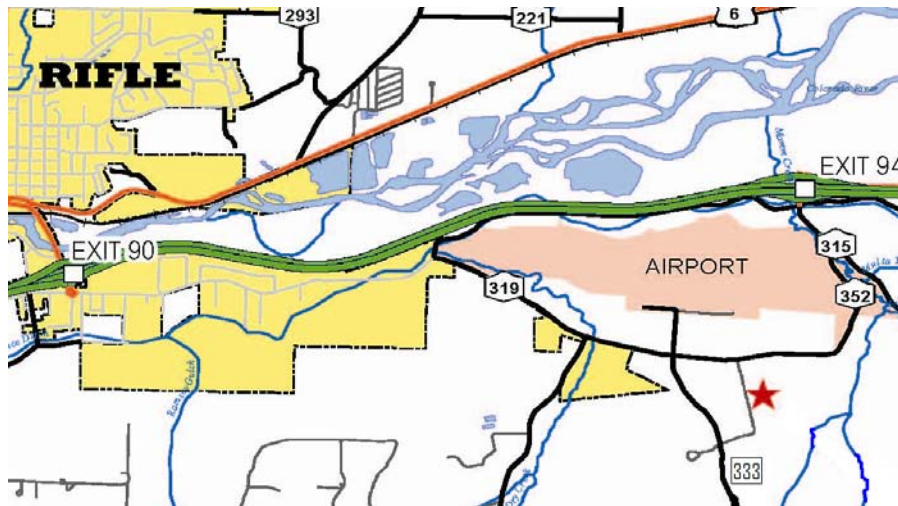
Sandbag Availability

Property owners who wish to prepare before the water rises can obtain free empty sandbags (limited quantities) and sand at the following locations when the threat of higher water is predicted:

Garfield County

- Sand and bags are available at the Hunter Mesa Road & Bridge Shop from 8:00am – 3:00pm Monday - Friday, 0298 County Road 333A, Rifle CO 81601. Residents will be limited to 20 full sand bags or 50 empty, if you are in need of more mitigation please contact Road & Bridge at 970-625-8601 for further assistance.

Map



Town of Carbondale

- Sand bags are available for purchase at the Roaring Fork Valley Co-Op, 0760 Hwy 133, Carbondale CO, 81623.

City of Glenwood Springs

- Sand and bags are available for purchase at the Lowe's, 0215 W. Meadows Drive, Glenwood Springs CO, 81601.

Town of New Castle

- Sand and bags are available for purchase at the Mr. T's Hardware & Building Supply, 6300 County Road 335, New Castle CO, 81647.

It will be the responsibility of property owners to remove and dispose of any sandbags on their property once the threat of High Water has past.



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 you 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.**

Except for heat related fatalities, more deaths occur from flooding than any other hazard. Why? Most people fail to realize the power of water. For example, six inches of fast-moving flood water can knock you off your feet.



While the number of fatalities can vary dramatically with weather conditions from year to year, the national 30-year average for flood deaths is 127. That compares with a 30-year average of 73 deaths for lightning, 65 for tornadoes and 16 for hurricanes. National Weather Service data also shows:

- Nearly half of all flash flood fatalities are vehicle-related.
- The majority of victims are males.
- Flood deaths affect all age groups.

Most flash floods are caused by slow moving thunderstorms, thunderstorms that move repeatedly over the same area or heavy rains from tropical storms and hurricanes. These floods can develop within minutes or hours depending on the intensity and duration of the rain, the topography, soil conditions and ground cover.



Flash floods can roll boulders, tear out trees, destroy buildings and bridges, and scour out new channels. Rapidly rising water can reach heights of 30 feet or more. Furthermore, flash flood-producing rains can also trigger catastrophic mud slides.

MORE HIGH WATER TIPS

- Call 9-1-1 to report any flooding or endangered property.**
- Do Not Attempt** a rescue without proper training and equipment.
- READY Kits**
A disaster supply kit with essential food, water, and supplies for at least three days (72-hours). This kit should be kept in a designated place and be ready to "grab and go" in case you have to leave your home quickly because of a disaster, such as a fire or flash flood. Make sure all household members know where the kit is kept.
- Move to higher ground away from rivers, streams, creeks, and storm drains. Do not drive around barricades.....they are there for your safety.
- If your car stalls in rapidly rising waters, abandon it immediately and climb to higher ground.
- Road beds may be washed out under flood waters. Never drive through flooded roadways.
- Keep children and pets away from fast moving streams and high water. Even six inches of water flowing quickly can knock you off your feet.
- Stay away from ground level transformers that are inundated by flood waters.
- If your basement is flooded, try to turn off the electric power to the house at the outside electrical panel. If the electrical panel is in the flooded area do not go near the panel.
- If you have natural gas or propane fired appliances try and turn off the supply to the house at the meter or at the tank.
- If boating or rafting early in the season, watch out for logs and floating debris.
- If flooding occurs, get to higher ground. Stay away from flood-prone areas, including dips, low spots, valleys, ditches, washes, etc.
- Don't allow children to play near high water, storm drains or ditches. Hidden dangers could lie beneath the water.
- Be especially cautious at night when it is harder to recognize flood dangers.
- Do not camp or park your vehicle along streams and washes, particularly when threatening conditions exist.
- Know what the weather is doing. Monitor NOAA Weather Radio or your local media for vital weather related information