

HOW TO

Fight Flooding At Home

How to obtain sandbags and sand PLUS how to fill them

The threat of flooding returns to Humboldt County every winter. Residents in flood prone areas need to take action well ahead of the start of rainfall by stockpiling sandbags, knowing where to get sand, knowing how to fill the bags, and then how to stack them.

It is as important to be prepared for a flood event as it is to be prepared for an earthquake or other natural disaster. The following floodfighting information has been prepared to help property owners protect their land, homes, and businesses.

 Planning &  Self-Reliance
Are the Keys to Flood Preparation

Provided by:
NOAA National Weather Service
California Department of Water Resources
Humboldt County Office of Emergency Services
Humboldt County Department of Public Works
California Conservation Corps



Sandbags

A & L Feeds

2308 Central Avenue
McKinleyville
839-3265

Hensell Materials

4475 Broadway
Eureka
443-9785

Main Street Feed

1635 Main Street
Fortuna
725-5565

Nilsen Feed

502 Broadway
Eureka
442-3741

Nilsen Feed

1593 Market Street
Ferndale
725-5316

Three G's Hay and Grain

5307 Boyd Road
Arcata
826-9537

United Rentals

3132 Jacobs Avenue
Eureka
442-9378

As Of: April 6, 2011

Sand

Eureka Ready Mix

Arcata Boyd Road 822-1795
Eureka Hilfiker Lane 443-2791
Alton Hwy 101 at Hwy 36 725-4417
Blue Lake 1750 Glendale 822-2937

Hensell Materials

4475 Broadway
Eureka
443-9785

Hoopa Aggregates

Behind Modular Plant
530-625-4017

Kernen Construction

1195 Hatchery Road
Blue Lake
825-8342

Mercer Frasier

Cooks Valley 247-3417
Dinsmore 574-6343
Fortuna Dinsmore Dr. 725-2151
Fortuna River Walk Dr. 725-2326
Willow Creek 530-629-2140

Randall Sand and Gravel

Sprowel Creek Road
Garberville
923-2820

Taylor's Supplies

1011B W Del Norte
Eureka
443-1431

Wes Green Landscape Materials

6360 West End Road
Arcata
822-8035

HOW TO: Fill a sandbag build a sandbag barrier

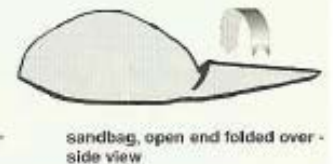
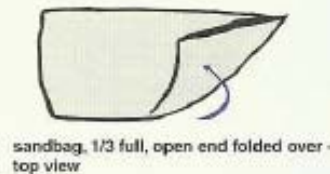
a. Work with another person, with one of you holding the bag while the other shovels sand or other material. The first shovelful is placed on the edge of the bag to keep the bag open. The bag holder should bend at the waist, with elbows resting on knees. The shoveler gets rounded scoops of sand and fills the bag to **just one-third full**. Avoid injury by not twisting while shoveling.



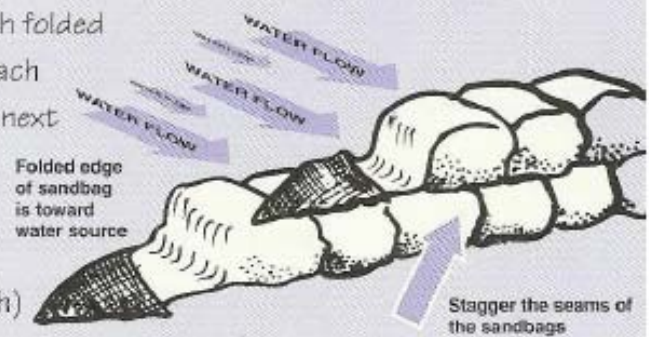
b. Fold over the open end of the bag in a triangle to prevent sand from leaking out. Close-knit burlap bags are recommended.



c. Your finished bags will look like this:

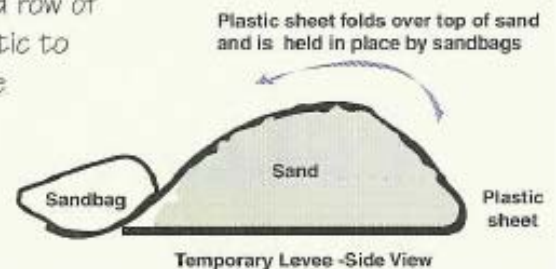
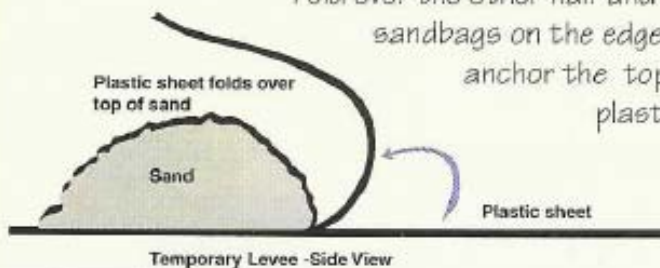


d. Place a line of bags with the folded side up, with folded edges facing the direction of water flow. Stomp each bag into place. Like you would with bricks, stagger the next layer of bags over the folded tops of the bags underneath. Stomp each layer of bags. To give the structure stability, the base should be 1.5 times wider than the height. (Example, 6 ft. wide by 4 ft. high)



e. When you don't have time to build a sandbag barrier, use a temporary levee to raise low areas. Prepare ahead by buying 20-foot-wide sheets of plastic (6-10 mil thickness). Lay out the length you need and place sand, dirt, or gravel on the half facing your property.

Fold over the other half and place a solid row of sandbags on the edge of the plastic to anchor the top edge of the plastic sheet.



f. In locations where water could rise with no current, such as at lake shores, lay visquine plastic on the ground and up to walls, and form a half pyramid of sandbags. Cover doors and vents with plywood.



MANAGING A FLOOD FIGHT

Planning and management can greatly enhance the effectiveness of a flood fight. Someone should be in charge at all times. They should be coordinating the placement of supplies and the utilization of the flood fighters. They should also be watching for early signs of danger such as rising water and worker fatigue.

FLOOD FIGHT SAFETY

Working on floods involves bringing people and machinery together to combat nature's changing forces. The sense of urgency often associated with flooding combined with the inevitable fatigue makes for a dangerous combination. The tips below will help you be aware of the possible dangers in advance and plan accordingly. Ultimately, the safety of the people working to protect against flooding is much more important than the property being saved.

- **Changing River Conditions:** Rapid river rises can easily go unnoticed when your attention is diverted during sand bagging. Make sure that someone is monitoring the river conditions and ensuring that workers are not isolated by rising water. Flood fighting should be suspended when the safety of workers is compromised by rising water. Saving property is not as important as saving lives.
- **Swift Water:** High water velocities are common during flooding events. Flood fighting should not be conducted if it requires workers to be near or in swift water.
- **Animal Exposure:** Flooded areas force a variety of animals to evacuate to high ground. Workers in these areas should be aware of these animals, including reptiles, and not handle them.
- **Contamination:** Flooded areas can potentially carry high level of contaminants. Wear protective clothing to help limit contact with water, and always wash thoroughly after working around flood water.
- **Exhaustion:** The stress combined with long, physically demanding hours can take effect on the flood worker. It is very important for someone to watch for and recognize exhaustion and treat it aggressively. Rotating workers out of the most vigorous tasks, and ensuring that breaks are taken, will help eliminate fatigue factors.
- **Body Mechanics:** Care must be taken by flood fighters with regards to work conditions. Safe lifting techniques and weight distribution must be a conscious effort for every individual. Avoid lifting and twisting at the same time by arranging the location of the sand, bags, and workers to minimize the need for rotation. Flooded surfaces can be slippery and cluttered with tripping hazards. Walk slowing and take small steps. Never step into water of an unknown depth.
- **Structural Considerations:** When working around structures, be aware of downed power lines, gas/propane leaks, and unstable structure supports.
- **Safety Gear:** Rain gear, warm clothing, handheld lights, gloves, goggles, hardhat, boots, first aid kit, ropes, floatation devices, hip boots.