

MITIGATION



FEMA

Rebuilding or Repairing Your Flood Damaged Alaska Home

When the floodwaters recede and you begin to clean up, dry out, and repair or rebuild your home, you have a chance to do it in a way that will reduce damages the next time the river floods. Take the time to develop a plan, and look for ways to make your home stronger, warmer, safer, and more disaster resistant. Be sure to take pictures of your property damage.

Assess the extent of the damage

Make a careful inspection of your home after the flood. Are the walls or floor badly cracked or twisted? Has your home shifted on its foundation, or been undermined by erosion? Avoid spending time, effort and money on a building that is not structurally sound. It may be possible to repair the damage, but some homes are so badly damaged that they need to be replaced. If you have any doubts about this, get more information and opinions from trusted sources before investing in repairs. (check in list of Resources)

Make a plan before starting the job

Can you salvage enough materials to repair or rebuild your home, or will you need to buy new materials? Unfortunately, many people tear out or destroy materials that could be cleaned and reused. Should you raise (elevate) your home before repairing it, or move it to a new site that is safe from flooding? It is sometimes better to elevate or relocate a building before repairing it. A clear plan will help avoid problems and save time, effort and money.

Repairing or rebuilding on the same site



A sturdy and adequately elevated foundation should be part of the “retrofitting” or rebuilding of your existing home. Elevating a home is a big job that calls for special skills and equipment, but is often a good way to prevent or at least reduce future flood damage. Because future flood levels are impossible to predict with accuracy, plan your project so that the floor will be at or above the recommended building level for your area (if that has been established), or at least two feet above the highest previous flood level in your area. The open framework of the elevated foundation systems commonly used in Alaska (see photograph) allows floodwaters to pass freely beneath the building.

Relocating your home

Moving an existing home requires even more skill and special equipment than raising the building on the same site, but moving to higher ground can provide the best protection from flooding.

What flood damaged materials can be saved and reused?

House components made of solid wood, some wood furniture, and many hard-surface items can usually be saved by washing, disinfecting (use a solution of 1.5 cups of bleach mixed with 1 gallon of water) and careful drying. It is essential to wear a painter’s mask and latex gloves during the cleaning process. Many homes in rural Alaska have plywood installed under the floor joists to protect the floor insulation and stop drafts. It also is common to have large sheets of rigid foam insulation attached to the bottom of the plywood panels. This insulation can usually be cleaned and reused after a flood, as follows:



Step #1
Remove rigid insulation by using an 8” long diagonal cutting pliers to cut the head off of each nail presently holding the insulation in place. Remove plastic/metal retaining washer and save if you can for reuse.



Step #2
Gently remove insulation by pulling straight down using a flat pry bar. After you have removed the insulation, remove the remaining nails with a claw hammer or nail puller. It will help if you number the pieces so you can install them in the same order you removed them.

Step #3
Clean, stack and store rigid insulation with a cover sheet of plywood for protection and weight the stacks with rocks or other heavy objects to keep them from flying away.



Step #4
When reinstalling, you can use button roof nails that have a washer to prevent punching holes in the insulation or a combination of exterior wood screws and conklin galvanized plates. Use aluminum sticky tape on the panel joints. This system will make it easier if you have to do it again in the future. If you elevate your home to at least two feet above the highest known flood level in your area, you may avoid flood damage altogether.

What must be discarded?

Porous flood soaked materials such as drywall, carpet, upholstered furniture, mattresses and other items must be promptly removed, and in most cases discarded. Fiberglass batt insulation exposed to flood water is often contaminated with bacteria or hazardous materials such as sewage, fuel oil and mold. These can cause serious health problems.

How can you reduce losses in the next flood?

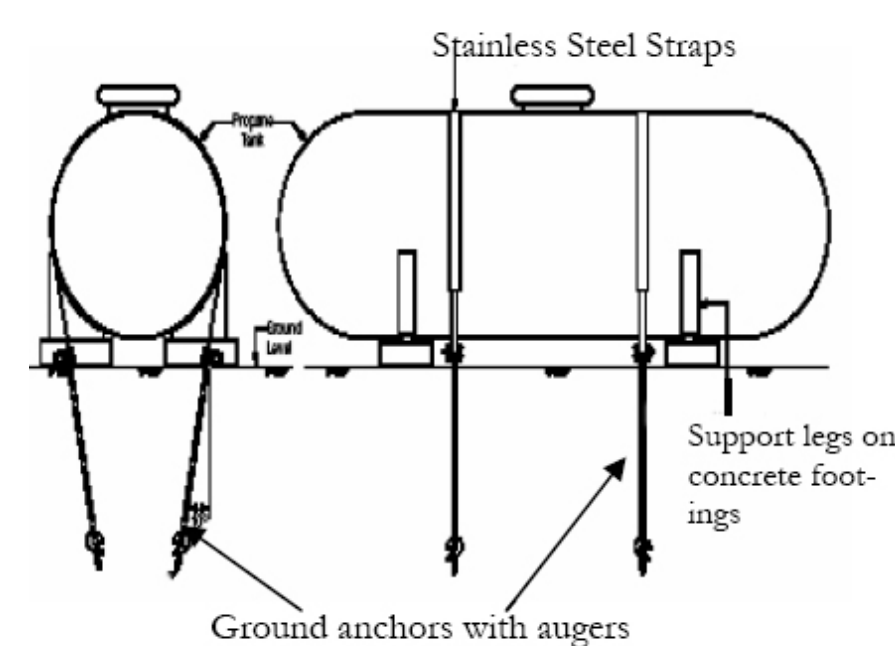
Residents of flood-prone areas have used a variety of flood-resistant building materials and repair methods, and have taken other actions that have reduced damages and costs. Here are a few additional suggestions:

- Insulation – When rebuilding, consider using rigid foam insulation, especially in floors and the lower parts of walls. It is more expensive than fiberglass, but it is reusable and much more effective in controlling heat loss.



- Plywood – Install (or reinstall) plywood panels with deck screws and a power screw driver. This will make it easier to remove the panels with less damage and many panels will be reusable.

- Utilities – During repair or rebuilding, electrical wiring, junction boxes, switches and outlets can be relocated above expected flood levels.



- Hazardous materials storage and safety – It is critical to keep fuel oil, gasoline, propane, and other explosive or toxic materials from spilling. Elevated fuel tanks must be securely strapped to a support or stand that is anchored to the ground to avoid toppling or floating. Tanks will still float even when full. In advance of a flood, shut off fuel valves. Always store toxic materials in a safe location.



Elevation of Equipment by Creating a Safe Platform Above Flood Waters

- Property storage – With adequate warning of a coming flood, electronic equipment, appliances, furniture and other valuables can usually be placed high enough to keep them out of water. Alaskans have built mounds, elevated platforms, and even rafts to protect animals, vehicles and other property from floodwaters. Snow machines, four-wheelers and other vehicles can usually be moved to higher ground.

Important Information for Home Owners, Town and Village leadership

Taking pictures and gathering detailed information about both public and private properties before and after a disaster is very important! Pictures of damage, maps showing the extent of the disaster and descriptions about what happened can be used to:

- Identify the type and extent of the damage that occurred.
- Help settle insurance claims.
- Help in obtaining FEMA disaster assistance or SBA low-interest loans.
- Communicate with state and federal agency representatives.
- Prepare mitigation measures to minimize the effects from future events.
- Update your hazard mitigation plan and evaluate the success of previous mitigation actions.

Resources:

Federal Emergency Management Agency
www.fema.gov

Alaska Division of Homeland Security and Emergency Management. www.Ready.Alaska.Gov

Alaska National Flood Insurance Program (NFIP) and Floodplain Management (FPM)
www.commerce.alaska.gov/web/dcra/PlanningLandManagement/FloodplainManagement.aspx

Cold Climate Housing Research Center
www.cchrc.org

University of Alaska Fairbanks Cooperative Extension Service www.uaf.edu/ces/