



FEMA

Best practices

Disaster Mitigation Working in Alaska



Elevated Homes in Alakanuk Stay Dry – So Far



Alakanuk home elevated 6 feet on post and pile foundation in 2005.

What is Retrofitting?

Retrofitting means making changes to an existing building to protect it from flooding or other hazards such as high winds and earthquakes.

What is Elevation?

Raising your house so that the lowest floor is above the flood level.

Alakanuk, Alaska - Using a boat to move around town for a few days each spring is not unusual for the residents of Alakanuk, a southwest Alaska community of about 600 people on the lower Yukon River. Flooding is common in the region at this time of year as the Yukon breaks up, and water and river ice dammed by the still shore-fast ice on the Bering Sea overflow the banks of the river at Alakanuk (and at its upstream neighbor Emmonak). Many of the homes in the riverside communities of the lower Yukon are elevated on pilings about 6 feet above the tundra.

Alakanuk is not on a major bend of the Yukon, but stretches along a 3-mile reach on the north bank of the channel. About 25 homes along the bank are threatened by erosion, a continual process that is exacerbated by the almost annual ice-jam floods of varying severity and damage potential.

In 2005, eight homes and the City of Alakanuk office building were relocated, and all but one of the homes were elevated, most of them to a height of 6 feet above the natural ground surface,



Process of elevation

which is the recommended building elevation designated by the Corps of Engineers. The relocation and elevation project was funded with a \$265,000 grant from FEMA's Hazard Mitigation Grant Program (HMGP); the grant application was processed and the funds administered by the Alaska Division of Homeland Security and Emergency Management (DHS & EM).

In May 2006, snowmelt and ice-jam flooding on the lower Yukon caused inundation of Alakanuk with ice-laden water to depths up to 6 feet. At least one home, which had been within 30 feet of the river before it was relocated and elevated, would surely have been destroyed by the water and ice blocks the size of cars at its original site. This home and the six others that had been relocated and elevated escaped damage to the main structure. In the home that had been moved but not yet elevated when the floodwaters struck Alakanuk in 2006, the floor and some insulation was damaged by 4 to 5 feet of water.

The severity of and damage caused by ice-jam floods along the lower reaches of the Yukon and other western Alaska rivers varies from year to year. The relatively severe flooding in May 2006 tested the effectiveness of the relocation and elevation project in Alakanuk; except for the single home that had not been elevated, the project "passed." Spring flooding in each of the subsequent years, most recently in late May 2009, was less severe, and the community was only minimally affected.



This Alakanuk home had been moved but not yet elevated when the 2005 floods struck. The owner's son is pointing at the level reached by the flood.

More Information

FEMA publication 312, Homeowner's Guide to Retrofitting: Six Ways To Protect Your House From Flooding, provides information that will help you decide whether your house is a candidate for retrofitting.

www.fema.gov/library

