

2005 Kaktovik Blizzard



January 8-12, 2005

Overview

On January 8th, 2005, a low pressure system moved towards Kaktovik, bringing extremely high winds which knocked down power lines. From the evening of January 8th until January 11th, over two thirds of Kaktovik was without power. Many people sheltered in the local school and equipment maintenance buildings that ran on generators, but their fuel ran low quickly. Inside temperatures dropped below freezing and 10 foot snowdrifts made roads impassable. All electrical equipment froze up, including snowplows. Two Kaktovik residents were injured and property damage totaled about \$9.15 million.

Weather Woes

A record warm air mass helped fuel a strong storm that moved from west to east north of the North Slope coast before becoming nearly stationary in the western Canadian Arctic. The resulting long duration northwest winds replaced the mild air mass with much colder air. On the eastern North Slope, the Brooks Range mountains are not far south of the coast, and the combination of winds flowing into the mountains and cold air rushing in resulted in extremely high wind speeds on the coast that produced a blizzard. This is a common occurrence at Kaktovik in the winter, but the storm slowing down to the northeast allowed the extreme winds to persist for several days. The winds also created blowing snow, reducing visibilities to below 1/4 mile, crossing the National Weather Service's threshold for a severe blizzard.

Disaster Declared

January 15, 2005 Governor Murkowski issued a state disaster declaration

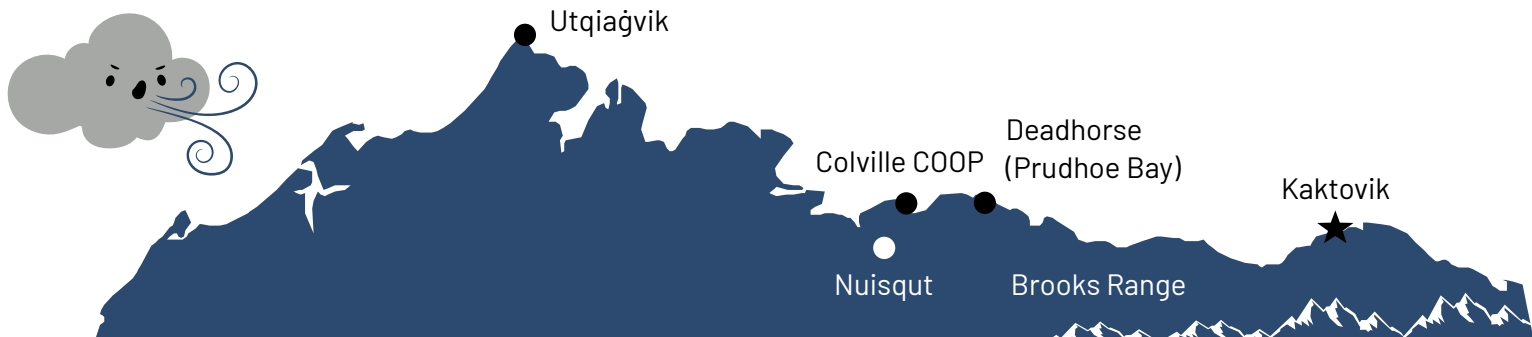
March 14, 2005 President W. Bush approved a federal disaster declaration

The State of Alaska approved \$6.7 million in individual and public assistance & hazard mitigation funds (2005 dollars)

FEMA approved \$2,459,682 in public assistance for the North Slope Borough (2005 dollars)



The Kaktovik weather station **stopped reporting** at 10:35pm on Jan 8th, but residents estimated **75 mph** gusts and **-60°F windchill**. -60°F windchill was recorded in **Deadhorse** and 64 mph gusts were recorded at NWS' **Colville** Cooperative station.



Community Impacts

Lost Power



Jan. 8 & 9

Jan. 10

Jan. 11

Jan. 12

Power grid failed for 2/3 of Kaktovik at 5:00pm AKST on 1/8; automated **weather station stopped reporting** at 10:35 pm; rest of village lost power afternoon of 1/9; temperatures dropped to **-20°F**; **286 people** moved to the school which lost power later that night; 8-9 families moved from the school to shelter in the equipment building (fuel powered)

Larger buildings reliant on generators ran low on fuel; **inside temperatures dropped below freezing** which damaged pipe systems; people used propane, wood stoves, and kerosene to heat houses; National Guard helicopter with repair technicians and electrical supplies **delayed in Utqiagvik**

National Guard helicopter successfully lands; two electrical linemen and 600 pounds of portable generating equipment **restore power**; food and supply plane emergency landed in **Prudhoe Bay** due to persistent blizzard conditions

North Slope Borough nearly opted to use ground transport to get emergency supplies from Prudhoe Bay to Kaktovik (120 miles, 18 hour journey) due to air delays, but weather cleared and crews successfully delivered **water, meals, diapers, and infant formula** by air to **Kaktovik**

Other Impacts

- **10-20 foot snowdrifts**; low visibilities reported at Colville COOP and Deadhorse
- All heavy equipment froze up (including snowplows), made **roads impassable**
- Man fell **10 feet** after walking off the edge of a snow drift (broken ribs)
- City employee **injured knee** while doing response and repair work
- **Freeze-up damage** to household hot water baseboard style heating systems and the city's new **\$28 million** sewer and water system



Kaktovik covered in snowdrifts after the storm

Explore other extreme events at uaf-accap.org/projects/extreme-events-library

Sources: Alaska State Disaster List, CNN, FEMA Disaster Declarations, NBC News, Storm Events Database, Zuromski, L. (2014). EXTREME WEATHER EVENTS ON THE LAST FRONTIER: METEOROLOGICAL ANALYSES AND SOCIETAL IMPACTS.

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