Bob Koweluk/Tundra Times

The northwest Alaska city of Nome experienced a cold spell with temperatures dipping below minus 50 during the winter of 1974 after a November storm surge. Houses and other property located near the Bering Sea shore on low lands were submerged by the surbe. Huge waves driven by high winds caused some $12 million property damage to the city.

Storm surges; Agency studies coastal flooding

By BOB KOWELUK
Tundra Times Reporter

Somewhere over the sea a large low pressure zone is building. A storm is brewing during the fall as people are at their seasonal berry picking and hunting camps. Fishermen are coming to shore knowing a storm which may be too rough to ride is in the making. Weather warnings are announced over the radio stations. Long time residents who saw the signs of a storm brewing early verify the information tempered with long years of observation. Those who stand to loose property tend to securing what is theirs. Several camping groups gather to discuss the upcoming weather and decide to move camp to higher ground. Boats are pulled up, windbreaks are built around tents to stop the force of high winds. Businessmen worry about the location of their businesses so close to the shore. Everybody settles in for the storm.

A flood occurs sometimes during the storm, submerging the low coastal lands. The flood is noticed only by the animals for there are no people to see.

Farther along the coast in a population center the flood occurs. The water level rises steadily, becoming higher and more dangerous with each pounding ocean wave. This storm promised a flood. Now to wait and see...

Storm surge is a term used to describe coastal flooding which occurs along the coast along the Bering, Chuckchi and Beaufort Sea coasts.

Storm surges are associated with intense fall storms in which a combination of the low barometric pressure, strong winds from an open sea, a shallow sloping sea bottom combine to cause floods over low onshore lands.

Weather forecasting by local residents and by the National Weather Service is a largely subjective process and knowledge of storm surges depends on the experience of the individual forecaster. In the past there have been attempts to assess the hazard potential of storm surges, particularly along the Beaufort Sea coast by the Bureau of Land Management and the National Oceanic and Atmospheric Administration and by companies interested in oil development at Prudhoe Bay. But the records of storm surges are not complete and it seems that many of the coastal flooding events happen unseen, not recorded or poorly recorded.

Jim Wise, state climatologist with the University of Alaska Arctic Environmental Information and Data Center is seeking information on coastal floods that have happened the last 20 years.

"If the strom surge is something recent," Wise said, "and if persons can get a good date and location for the local flooding, we can find the actual weather maps that correspond to the particular storm surge reported.

This information would be very helpful to develop a forecasting method. It is surprising that from various publications we've looked through so far, we've come up with some 60 cases of storm surges that were written up in newspapers and magazines.

"Not all storm surges have been written about, so that is why we are looking for some first hand accounts of coastal flooding by people living in the coastal villages.

"If the flood can be remembered with something else that happened, like a wedding, birthday or other special time, (say like, I remember when this happened on this month, week and year, and a flood happened

(Continued on Page 13)

Bob Koweluk/Tundra Times

Leo Kunnuk Jr. and Andrew Mayac, originally from King Island, stand somberly before wrecked homes at the "east end" of Nome. They said the storm came up, huge waves broke free the barges, used to unload cargo from ships. The waves pushed the barges along the beach causing more damage to homes along with the flood tide and huge waves. Homeowners such as Mr. and Mrs. Koyuk said they and others attempted to save as much as they could from their homes before the flood caused them to stop and watch hopelessly the destruction of their homes throughout the night of the storm. When the winds calmed and the tides receeded, the people who lived at east end went to find what they could of their homes and their belongings.

● Scientists seek storm information

(Continued from Page Nine)

along with it a week before...), this is the information we on the storm surge project would like to know about."

Information gathered about the storm surges is the greatest where there is a National Weather Service station, Wise said.

The storm surge study is to record known storm surges, to know something about their timing and frequency and to improve forecasting of storm surges by the National Weather Service.

"Knowledge of the extent of the flooding hazard in coastal areas would be good to know before planning onshore structures for industry and villages," Wise said. "Also with better forecasts we feel that the local populace would have a better chance to take actions to reduce the amount of property damage or loss of life resulting from the storm surges when it does occur.