

## Nenana Ice Classic: Tanana River Ice Annual Breakup Dates

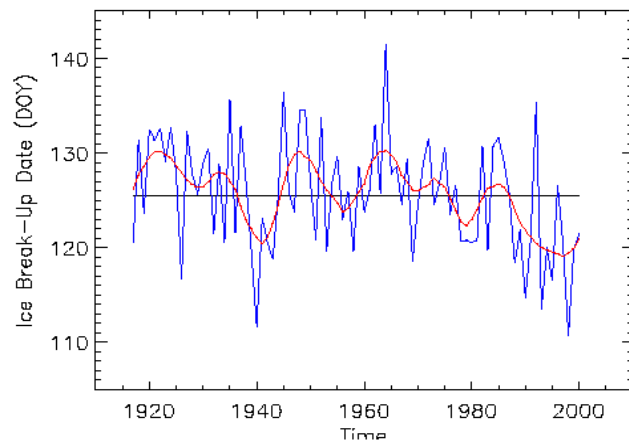
### Summary

The Tanana River in the interior of Alaska freezes over during October and November. The ice continues to grow throughout the winter accumulating an average maximum thickness of 110 cm, depending upon winter weather conditions.

The Nenana Ice Classic competition began in 1917 when railroad engineers bet a total of 800 dollars, winner take all, guessing the exact time (month, day, hour, minute) the Tanana River ice would break. Each year since then, Alaska residents have guessed at the timing of ice breakup. A tripod (connected to an on-shore clock that stops when the ice breaks) is planted in approximately a half meter of river ice during freeze-up in October or November. The following spring, the clock automatically stops when the tripod moves determining the official time of ice breakup.

Many factors influence ice breakup, such as air temperature, ice thickness, snow cover, wind, water temperature, and depth of water below the ice. Generally, ice on the Tanana River breaks up in late April or early May (historically, April 20 to May 20). The time series of the Tanana River ice breakup dates can be used to indicate climate change in the region.

Data are provided in ASCII format. The first data column indicates the year data were collected, the second column indicates the day and time in Julian date format that the ice breakup occurred. The third column lists the date and time of the ice breakup. These will be updated over successive years.



Time series of the Tanana River ice break-up dates for the period from 1917 through 2000. (The Tanana River is located in the Alaskan interior.) The blue line represents the annual river ice break-up dates in Julian days. The red line is a smoothed curve using a low-pass filter with a cut-off frequency of 0.091. The thin black line represents the mean river ice break-up date (May 5).

### Citation

As a condition of using these data, you must cite the use of this data set using the following citation. For more information, see our [Use and Copyright](#) Web page.

National Snow and Ice Data Center. 1998. *Nenana Ice Classic: Tanana River ice annual breakup dates*. Boulder, CO: National Snow and Ice Data Center. Digital media.

### References

Official [Nenana Ice Classic](#) Web site

### Document Information

**Document Revision Date:** April 2015

**Document Review Date:** 4 August 1998

**Document Curator:** NSIDC Writers

**Document URL:** [http://nsidc.org/data/docs/daac/nsidc0064\\_nenana.gd.html](http://nsidc.org/data/docs/daac/nsidc0064_nenana.gd.html)