



Russian River Ice Thickness and Duration, Version 1

USER GUIDE

How to Cite These Data

As a condition of using these data, you must include a citation:

Vuglinsky, V. 2000. *Russian River Ice Thickness and Duration, Version 1*. [Indicate subset used].

Boulder, Colorado USA. NSIDC: National Snow and Ice Data Center.

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FOR QUESTIONS ABOUT THESE DATA, CONTACT NSIDC@NSIDC.ORG

FOR CURRENT INFORMATION, VISIT <https://nsidc.org/data/G01187>



National Snow and Ice Data Center

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1 DETAILED DATA DESCRIPTION

1.1 Ice Duration Data Files

Ice freeze-up and break-up data are in files named `ice.nn`, where `nn` represents the station number. See the [station table](#) to match a station number to a station name and river. Missing values are set to 99 for dates, and to 999999 for ice heights. Each record has the following fixed-length and comma-delimited ASCII format fields:

Hydrological Year (yyyy)

The hydrological year runs from October through September, for instance, the year 1978 runs from October 1977 through September 1978.

The following four dates all concern the start of autumn and winter ice events:

Date of start of winter ice events (dd,mm)

The date at freeze-up that shore ice becomes fixed, and that frazil ice begins to form in the open river. Short-term ice events, such as periods of ice formation and dissipation that last less than 3 days and are separated by ice-free periods of 10 days or longer, are not included.

Date of start of frazil ice drift (dd,mm)

Date of start of ice flow drift in autumn (dd,mm)

Date of start of ice cover formation (dd,mm)

The date the ice cover on the river becomes stable. Ice must remain stable for more than 20 days after this date for it to be a valid date.

The following dates and data concern ice events in spring:

Date of start of ice melt (dd,mm)

The date that melt water appears on the surface of the ice, that ice motion occurs, or that holes appear in the ice.

Date of start of spring ice drift (dd,mm)

The date of ice break-up, when ice begins to drift downstream in the river.

Date of highest level of ice drift (dd,mm)

Highest level of ice drift in centimeters (xxxxxx)

Date when river is free of ice (dd,mm)

The last day ice is observed. Drifts of ice that last for 1 to 3 days after the main breakup has occurred are not included.

The following data concern any ice dam events:

Date of start of ice dam (dd,mm)

Date of highest level of dam (dd,mm)

Highest level of dam in centimeters (xxxxxx)

Duration in days of ice dam (nn)

The following data concern the duration of ice and ice events:

Duration in days of autumn frazil ice (nn)

Duration in days of autumn drift ice (nn)

Duration in days of spring drift ice (nn)

Duration in days of continuous ice cover (nnn)

Total period in days from start of winter ice events to date river is free of ice (nnn)

A sample record from the data file ice.05:

```
1978,06,10,99,99,07,10,08,10,19,05,19,05,21,05,000142,22,05,99,99,99,99,999999,  
00,01,00,03,223,228
```

1.2 Ice and Snow Thickness Data Files

Ice and snow thickness data are in files named icethic.nn where nn represents the station number. See the [station table](#) to match a station number to a station name and river. Ice and snow values are in centimeters; missing values are set to -1. Each record has the following fixed-length and comma-delimited fields:

Calendar Year (yyyy)

Month (mm)

Snow thickness on river ice for the 10th of the month (xxx)

River ice thickness for the 10th of the month (xxx)

Snow thickness on river ice for the 20th of the month (xxx)

River ice thickness for the 20th of the month (xxx)

Snow thickness on river ice for the last day of the month (xxx)

River ice thickness for the last day of the month (xxx)

A sample showing the first few records from the data file icethic.05:

		ICE THICKNESS (cm)					
KOLA - 1429 KM							
1977,11,	-1,	-1,	-1,	-1,	10,	19	
1977,12,	7,	25,	12,	31,	17,	35	
1977,10,	-1,	-1,	-1,	-1,	-1,	-1	
1978, 5,	-1,	-1,	-1,	-1,	-1,	-1	
1978,10,	-1,	-1,	-1,	-1,	2,	14	
1978,11,	0,	16,	3,	20,	18,	25	
1978,12,	21,	28,	37,	31,	10,	48	
1978, 4,	16,	60,	21,	62,	6,	56	
1978, 2,	37,	45,	40,	50,	34,	52	
1978, 1,	19,	35,	27,	41,	36,	42	
1978, 3,	27,	54,	20,	54,	19,	57	
1979, 5,	-1,	-1,	-1,	-1,	-1,	-1	

1.3 Quality Assessment

Quality checks performed at NSIDC were limited to checking dates for validity (for instance, there can not be more than 31 days in a month). If a date failed a test, the value was changed to "missing" (99), and the original data were printed to an error file named err.nn, where nn is the station number.

2 DATA ACQUISITION AND PROCESSING

Data were acquired with visual observations.

3 REFERENCES AND RELATED PUBLICATIONS

3.1 Related Data Collections

[Global Lake and River Ice Phenology Database](#)

[Nenana Ice Classic: Tanana River Ice Annual Breakup Dates](#)

4 CONTACTS AND ACKNOWLEDGMENTS

Acknowledgments:

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5 DOCUMENT INFORMATION

5.1 Document Authors

R. Welch created this document based on information from the data provider and from Dr. Larry Smith.

5.2 Publication Date

June 2000

5.3 Date Last Updated

02 October 2023