



# River Ice Guide

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National Weather Service Chicago, IL

## Frazil Ice



*Slush*



*Pans/Pancake*

## Sheet Ice



## Border Ice



## Ice Jams



*Freeze Up*



*Break Up*

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## GLOSSARY

**Frazil ice**

Fine, small, needle-like structures or thin, flat, circular plates of ice suspended in water. In rivers and lakes it is formed in super-cooled, turbulent water.

**Slush ice**

A floating agglomeration of loosely packed frazil ice that remains separate or only slightly frozen together.

**Pancake ice**

Circular, flat pieces composed of frazil and slush ice with a raised rim; the shape and rim are due to repeated collisions.

**Anchor ice**

Submerged ice attached or anchored to the river bed, regardless of the nature of its formation.

**Sheet ice**

A smooth, continuous ice cover formed by freezing in the case of lake ice, or by the accumulation of ice floes into a single layer in the case of river ice.

**Candled ice**

Decayed sheet ice that assumes the appearance of thin vertical crystals shaped like candles.

**Break up jam**

Accumulation of broken ice pieces that restrict the flow of water; may contain frazil ice or remnants of freeze up jam.

**Freeze up jam**

Accumulation of frazil that restricts the flow of water; may contain some broken border ice pieces.

**Shear walls**

Ice left along shoreline when a freeze up or break up jam fails and moves downstream.

*This ice guide was originally adapted from US Army Corps of Engineers CRREL River Ice Guide (1997).  
Image credits (left-to-right, top-to-bottom): USACE CRREL, Kankakee County EMA, Kankakee County EMA,  
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