

Ice-jam Flood Surveying



The large, poleward flowing rivers of Siberia, such as the Ob River, experience persistent and severe floods when river ice breaks up in the spring. Ice-jams are common on the Tom River, a tributary of the Ob, resulting in a rapid rise in water levels upstream of the jam and submergence of thousands of homes. Furthermore, a sudden breach of the ice-jam releases a flood wave that can cause extensive damage downstream.

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Floods in large rivers are caused by a variety of processes. River flows may rise to flood levels at different rates, from a few minutes to several weeks, depending on the type of river and the source of the increased flow. Slow-rising floods most commonly occur in large rivers where the increase in flow may be the result of sustained rainfall or rapid snowmelt. Localised flooding may be caused or enhanced by channel obstructions such as landslides or ice. [Land use changes, such as urbanisation or deforestation, can exacerbate natural flooding.](#)

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