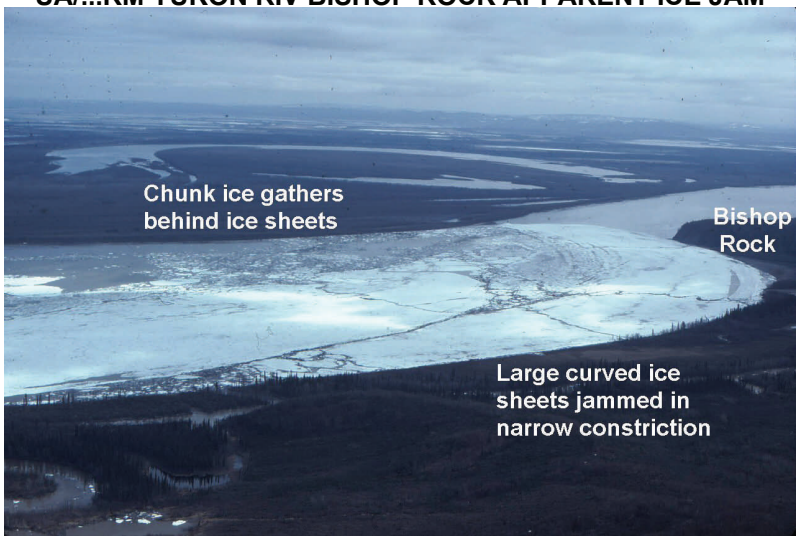
UA/...RM YUKON RIV BISHOP ROCK APPARENT ICE JAM



Ice jam - an ice run that has stopped moving due to any of a variety of reasons; characterized by a long reach of tightly packed chunk ice
Location format - point or segment

ICE JAM THREAT LOCATIONS

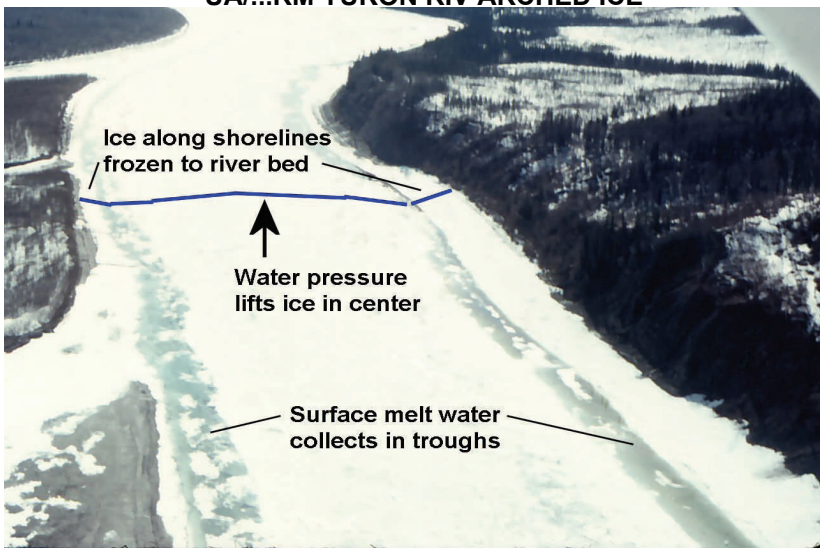
- **Ice jams can occur at any location**
- **Historic ice jam problems at Bishop Rock on the Yukon River and below Aniak on the Kuskokwim River**
- **Threats also associated with ice conditions at and up to 10 miles down river from…**

-Eagle, Circle, Fort Yukon, Galena, Koyukuk, Nulato, Russian Mission, Pilot Station, and delta villages on the Yukon

-McGrath, Sleetmute, Red Devil, Crooked Creek, Akiak, Kwethluk, and Bethel on the Kuskokwim

-Kobuk on the Kobuk and Buckland on the Buckland

UA/...RM YUKON RIV ARCHED ICE



Arched ice - ice that is attached to the banks, which rises in the center of the channel due to increased flow beneath the ice causing melt water to collect in channels along banks
Location format - point or segment

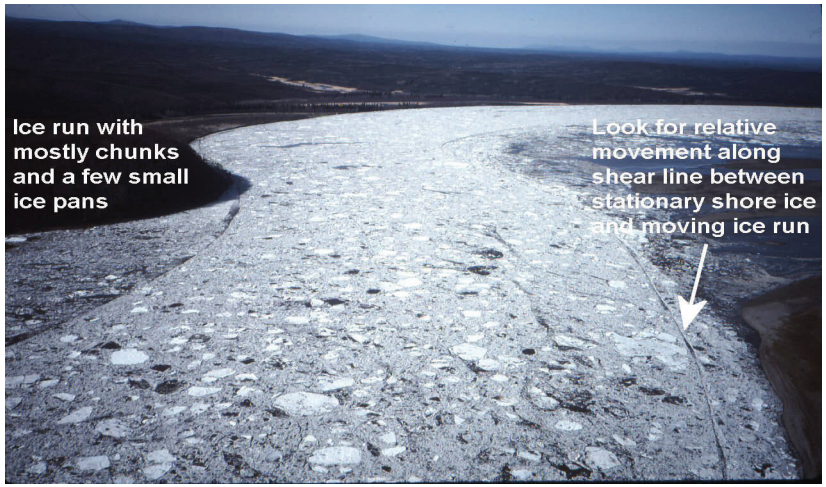
UA/...RM YUKON RIV HARD LIFTED AND SHIFTED SHEETS

Shifted ice - large ice sheets that have moved short distances from their original locations as rising water levels create wider areas of open water into which the ice can move
Location format - point or segment

UA/...RM YUKON RIV HVY MXD RUN

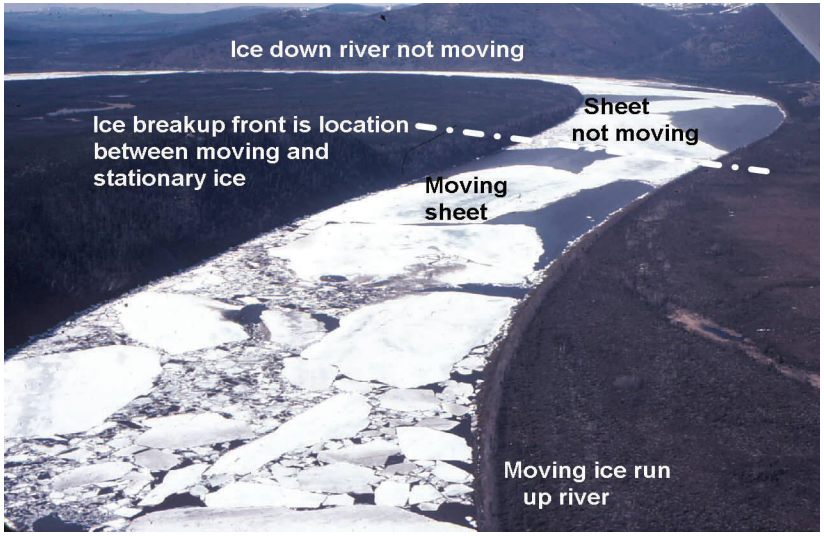
Ice run - a continuous length of moving ice
Location format - point or segment

UA/...RM YUKON RIV HVY RUN MOSTLY CHUNKS



Ice run - a continuous length of moving ice
Location format - point or segment

UA/...RM YUKON RIV BREAKUP FRONT



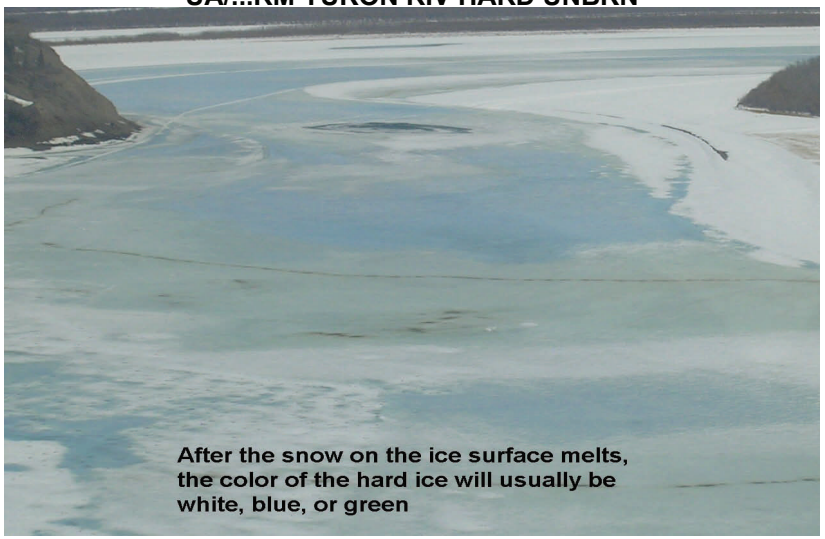
Breakup front - location along river where ice is moving upstream and not moving downstream
Location format - point only

- **Breakup date and time is when breakup front passes a location**
- **Flood threat due to an ice jam is greatest just after breakup front passes village**
- **Can be difficult to differentiate between breakup front and an ice jam**

The ice breakup front can move down river like an inch-worm...the front may stall out temporarily to wait for the back end to catch up...this would not be called an ice jam

Look for a significant amount of the ice run packing in up river from the location where the breakup front stopped...this would be an indication of an ice jam

UA/...RM YUKON RIV HARD UNBKN

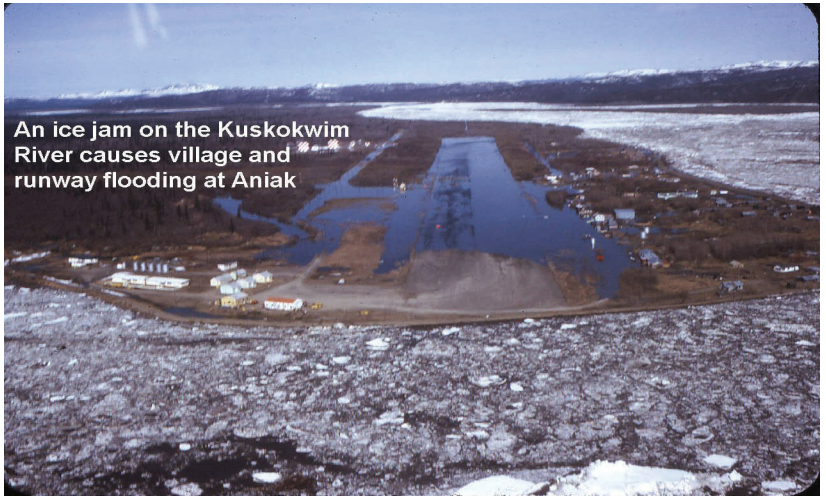


Unbroken ice - continuous ice surface that has few if any cracks
Location format - point or segment

UA/...RM YUKON RIV UNBKN MOSTLY ROTTEN ICE

Rotten ice - weak ice that appears black or brown
Location format - point or segment

UA/...RM KUSKO RIV ANI VILLAGE AND RWY (10% USABLE) FLOODING

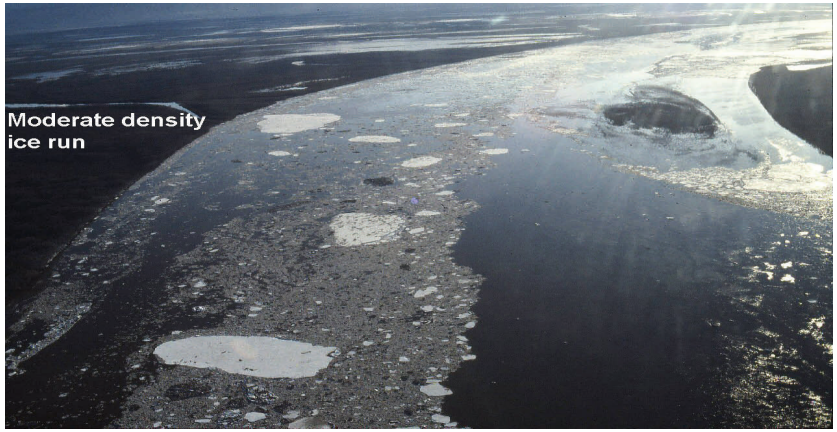


Village flood - water spreading into a village that covers roads or threatens buildings
Location format - point or segment

UA/...RM YUKON RIV WIDESPREAD FLOODING

Widespread flooding - water that has gone over the banks and covered vast areas of land that are normally dry
Location format - point or segment

UA/...RM YUKON RIV MOD ICE RUN



Ice or debris run - a length of river channel containing moving ice or debris (trees, brush, etc.)
Location format - point or segment

UA/...RM KOYUKUK RIV OPEN HVY STRANDED ICE ON SHORE

Stranded ice - ice pushed onto the banks or into side channels that is left behind after the ice has cleared out of the main channel
Location format - point or segment

Pilots Guide to River Ice

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For more on the River Watch Program, go to http://aprfc.arh.noaa.gov/rivwatch.php

Aerial photographs courtesy of APRFC staff, partner agencies, and participating commercial and private pilots

RIVER ICE PILOT REPORT REMARKS

River Watch is a voluntary program asking pilots to report observed river conditions.

- **Requesting observations that can be obtained without deviation from the normal route or flight level.**
- **Purpose of program is to assist the NWS in providing accurate forecasts, warnings, and navigation information.**
- **Standard method of reporting is to submit pilot report to FAA's Flight Service Stations by radio. In addition to reporting location and other standard pilot report elements, provide the river name and ice condition using standard remarks below. For example...**

FAI UA/OV GAL270013/TM 2355/FL060/TP C207/RM YUKON RIV BISHOP ROCK APPARENT ICE JAM

STANDARD REMARKS

PRE-BREAKUP
UNBKN ICE
ARCHED ICE
LIFTED ICE
SHIFTED ICE
OPEN REACH
HARD *OR* ROTTEN ICE
SNOW *OR* WATER ON ICE
OPEN HOLES *OR* LEADS
FLOW IN SIDE CHANNEL
FLOW ON ICE

ICE JAM CONDITIONS
APPARENT ICE JAM
ICE JAM
VILLAGE AND/OR RUNWAY FLOODING
(PRECEEDED WITH LOCATION NAME)
WIDESPREAD FLOODING
LOW LYING FLOODING

MOVING ICE
BREAKUP (BU) FRONT
ICE RUN…
-MIXED-
-SHEETS-
-PANS-
-CHUNKS-
X MILE LONG ICE RUN
(DISTANCE = X)
ICE RUN DENSITY…
-HVY (75-100%)-
-MOD (25-75%)-
-LGT (1-25%)-

POST-BREAKUP
STRANDED ICE
OPEN CHANNEL
ICE OR DEBRIS RUN
-HVY (75-100%)-
-MOD (25-75%)-
-LGT (1-25%)-

Pilot Report Format

Nearest VOR/Airport

Time

Altitude

Aircraft type and Equipment

Cloud type

Cirrus, Cumulus, Stratus

Cloud coverage

Clear, Few, Scattered, Broken, Overcast

Cloud Height

Visibility

Restrictions to Visibility

Haze, Smoke, Dust, Other

Precipitation Type

Rain, Snow, Virga

Precipitation Intensity

Light, Moderate, Heavy

Temperature (Celsius)

Wind Direction

Wind Speed

Turbulence

Light, Moderate, Severe, Extreme

Icing

Trace, Light, Moderate, Severe

Remarks

Provide remarks on river or lake ice conditions

Pilots Guide to River Ice

National Weather Service
Alaska-Pacific River Forecast Center
6930 Sand Lake Road
Anchorage, Alaska 99502-1845
907-266-5160

Email: nws.ar.aprfc@noaa.gov
Web: http://aprfc.arh.noaa.gov/