

Pilots' Guide to River Ice



National Weather Service
824 WFO Aberdeen, SD
Brown County 14
Aberdeen, SD 57401
605-225-5193

Email: abrreports@gmail.com or
Renee.Wise@noaa.gov

Web: <http://www.crh.noaa.gov/abr/?n=riverwatch.php>



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
 CITY/TOWN AND/OR RUNWAY
 FLOODING
 (PRECEDED 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
 BANKFULL
 ICE OR DEBRIS RUN
 -HVY (75-100%)-
 -MOD (25-75%)-
 -LGT (1-25%)-

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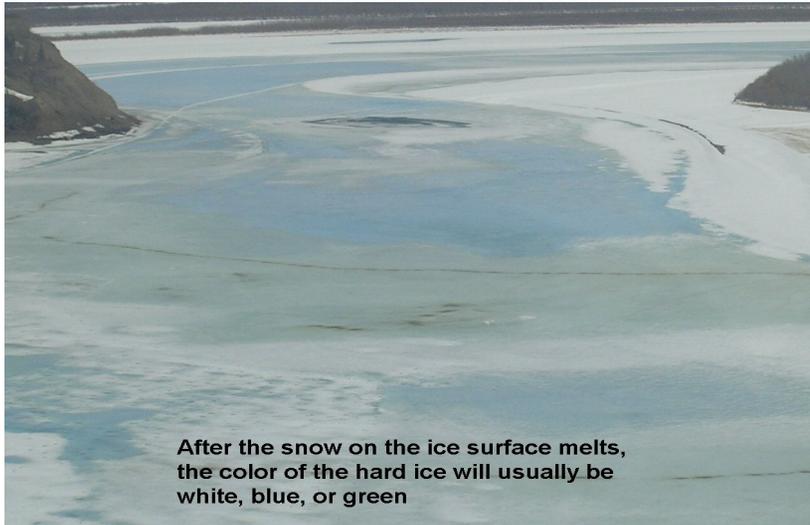
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For more on the River Watch Program, go to <http://www.crh.noaa.gov/abr/?n=riverwatch.php>

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

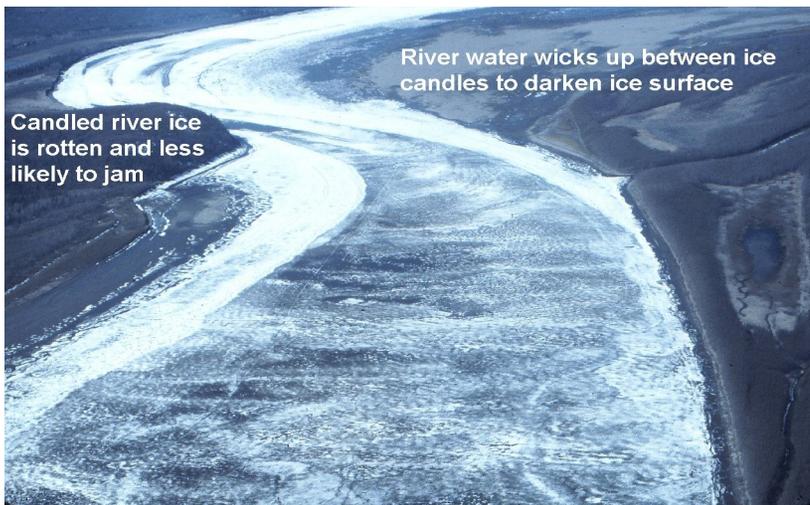
UA/...RM YUKON RIV HARD UNBKN



After the snow on the ice surface melts, the color of the hard ice will usually be white, blue, or green

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

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

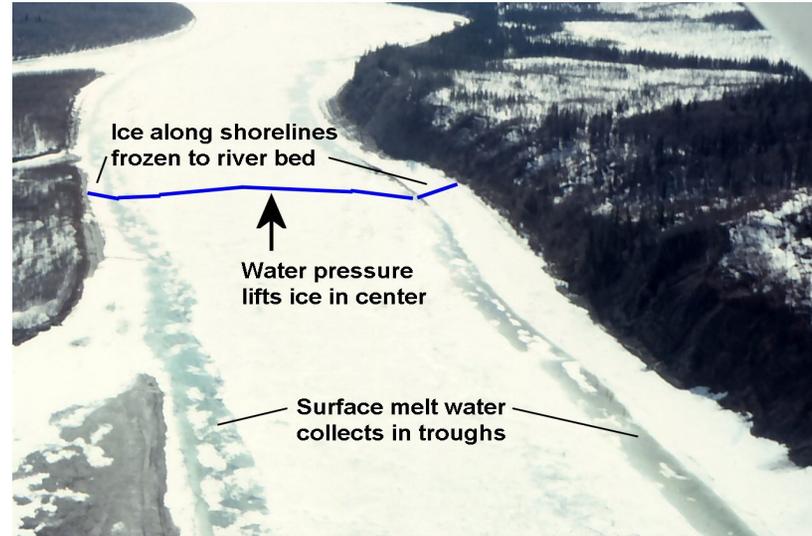


River water wicks up between ice candles to darken ice surface

Candled river ice is rotten and less likely to jam

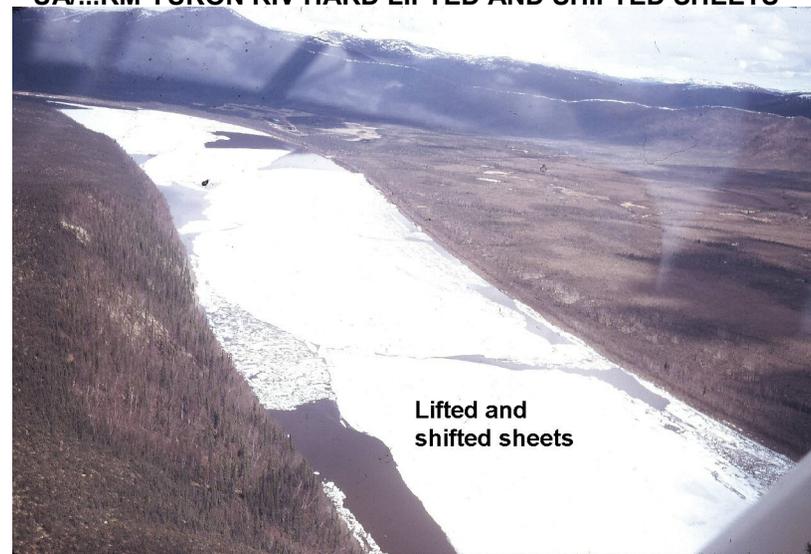
Rotten ice - weak ice that appears black or brown
Location format - point or segment

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



Lifted and shifted sheets

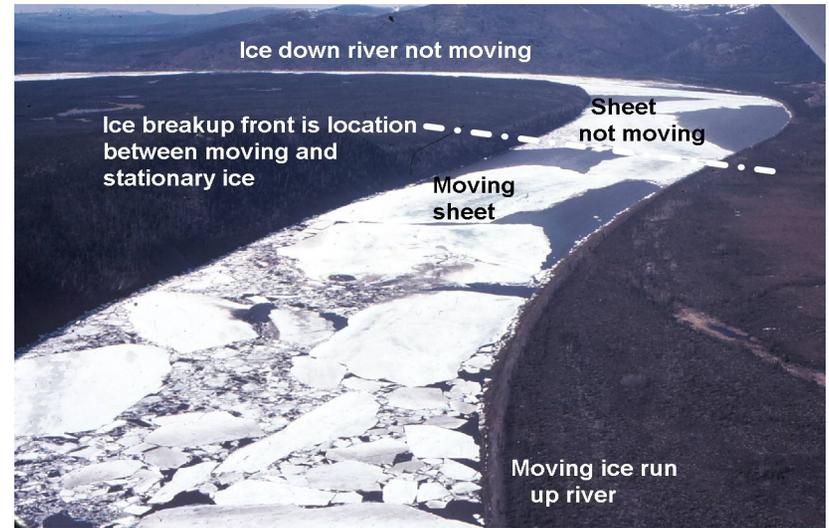
Shifted ice - large ice sheets that have moved short distances from their original locations as rising water levels create wider areas of open water into which the ice can move
Location format - point or segment

UA/...RM YUKON RIV HVY MXD RUN



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

UA/...RM YUKON RIV BREAKUP FRONT



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

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



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

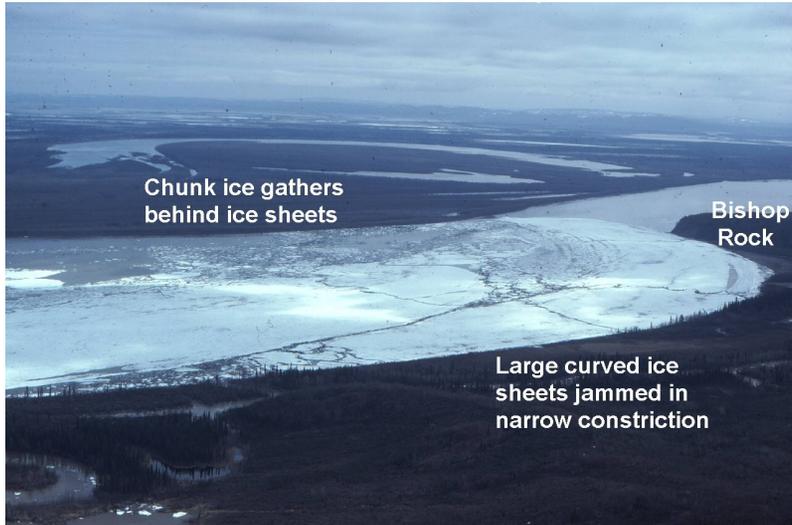
- Breakup date and time is when breakup front passes a location
- Flood threat due to an ice jam is greatest just after breakup front passes village
- Can be difficult to differentiate between breakup front and an ice jam



The ice breakup front can move down river like an inchworm...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 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

UA/...RM MILK RIV OPEN WATER BANKFULL



Bankfull - Water has reached the top of the river's banks; indication of imminent flooding
Location format - point or segment

UA/...RM COLUMBIA 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 LUOP 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

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