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MACKENZIE DELTA AND BEAUFORT COAST SPRING BREAKUP NEWSLETTER

Report **2018-21**

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Welcome to Breakup 2018

Welcome to the 2018 Mackenzie and Beaufort breakup season. We are now into our 13th season of the breakup newsletter, which was started by Steve Solomon in 2006.

This year is the third breakup season for the Mackenzie-Beaufort Breakup group on Facebook <https://www.facebook.com/groups/1745524288993851/>. Over time we hope this forum hosted in the ISR will take over as the main place to share observations and experience during breakup in the Delta and the coastal communities of the region.

Funding for our current breakup monitoring activity is from the Climate Change Geoscience Program of the Geological Survey of Canada, Natural Resources Canada. Again this year we are posting the newsletters on the CACCON website: www.caccon.org/mackenzie-beaufort-break-up-newsletter/. Please let us know if you do not wish to receive these reports (contact info above) and we will take you off the list. For those of you living in the north, we welcome photos, observations of timing of events, or anything out of the ordinary, and we thank you for all of the feedback received so far.

Water-level data are courtesy of Environment and Climate Change Canada [ECCC] (Water Survey of Canada) and derived from the real-time hydrometric data website at http://www.wateroffice.ec.gc.ca/index_e.html, which we acknowledge with thanks. Weather forecasts are also courtesy ECCC (Meteorological Service of Canada) at <http://weather.gc.ca>.

Current Conditions

This is the final update for the 2018 breakup season as there is little remaining nearshore ice in the region. Once again, we thank everyone for their attention throughout the breakup season and especially for sending observations and photos to contribute to the reporting. We wish everyone a happy and safe summer boating season.

In Inuvik, today's forecast calls for cloud with a high of 20 °C and NW wind at 20 km/h. Aklavik can expect cloud, a chance of showers with a risk of a thunderstorm, and a high of 18 °C. Out on the coast at Tuktoyaktuk there is cloud, a high of 13°C falling to 9 °C this afternoon, and an overnight low of 3 °C. Paulatuk also has a chance of showers with a thunderstorm risk but conditions are expected to clear this afternoon bringing an expected high of 14 °C. Ulukhaktok can expect cloud, a chance of showers, wind SE 20 km/h, and a high of 11 °C. At Sachs Harbour, the forecast calls for cloud, wind SE 20 km/h, and a temperature falling to 7 °C this afternoon.

Satellite Imagery

MODIS imagery from July 14, 2018 shows the Yukon coast to be ice with the exception of some mobile floes just offshore, west of Herschel Island (Figure 1). Only small pieces of ice remain off the northernmost portion of the Mackenzie Delta and off Kugmallit Bay. It is a similar story along the Tuktoyaktuk Peninsula with small pieces of ice getting progressively larger moving northeast into Liverpool Bay. There are some larger ice floes just west of Cape Bathurst, outside of Liverpool Bay.

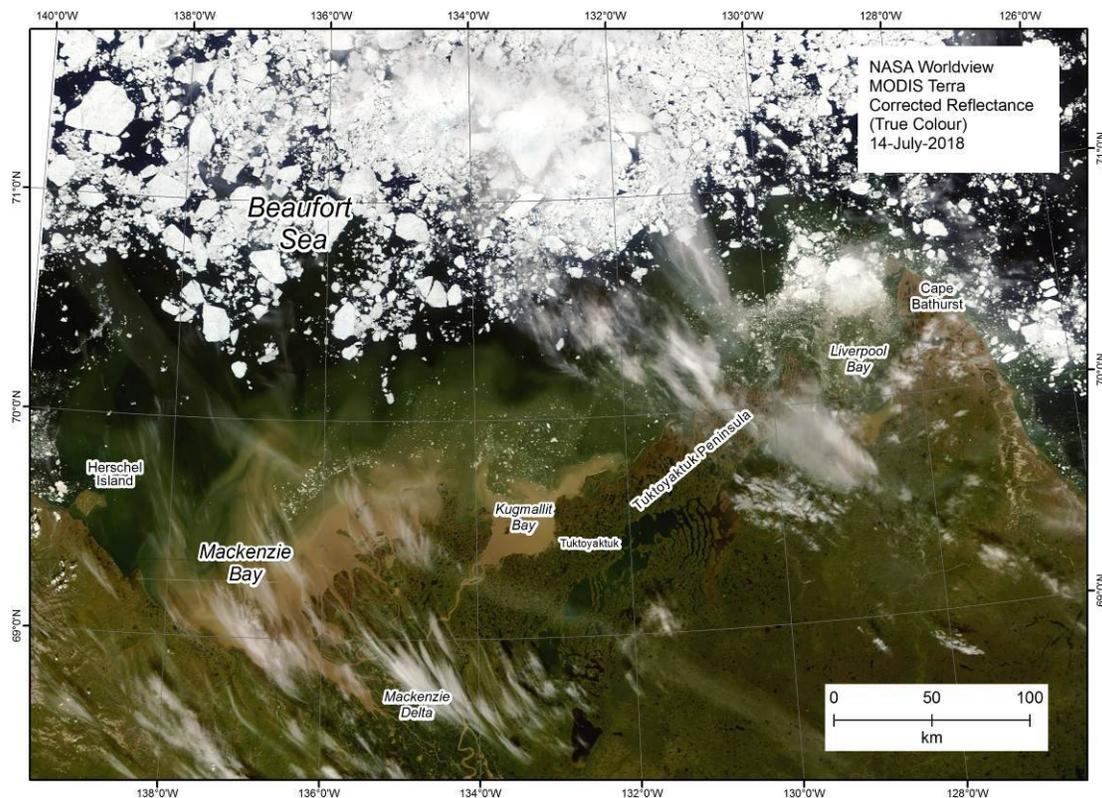


Figure 1. NASA Worldview Corrected Reflectance from Terra - MODIS for 14 July 2018, showing the Beaufort Sea coast from near the Yukon – Alaska border to Cape Bathurst.

Imagery of Amundsen Gulf from July 14 and 15, 2018 (Figures 2 and 3) show that the communities of Sachs Harbour, Paulatuk, and Ulukhaktok are ice-free. Darnley Bay is mostly clear and Franklin Bay has some ice hanging around its mouth. Some ice remains in place around Cape Parry. Both Prince Albert Sound, and Dolphin and Union Strait have broken ice at their entrances while the ice in Minto Inlet is broken but remains in place. Landfast ice remains in place along the west coast of Banks Island and the mobile ice pack has moved in beside the landfast ice edge. Some lakes around Ulukhaktok and Sachs Harbour maintain at least partial ice cover.

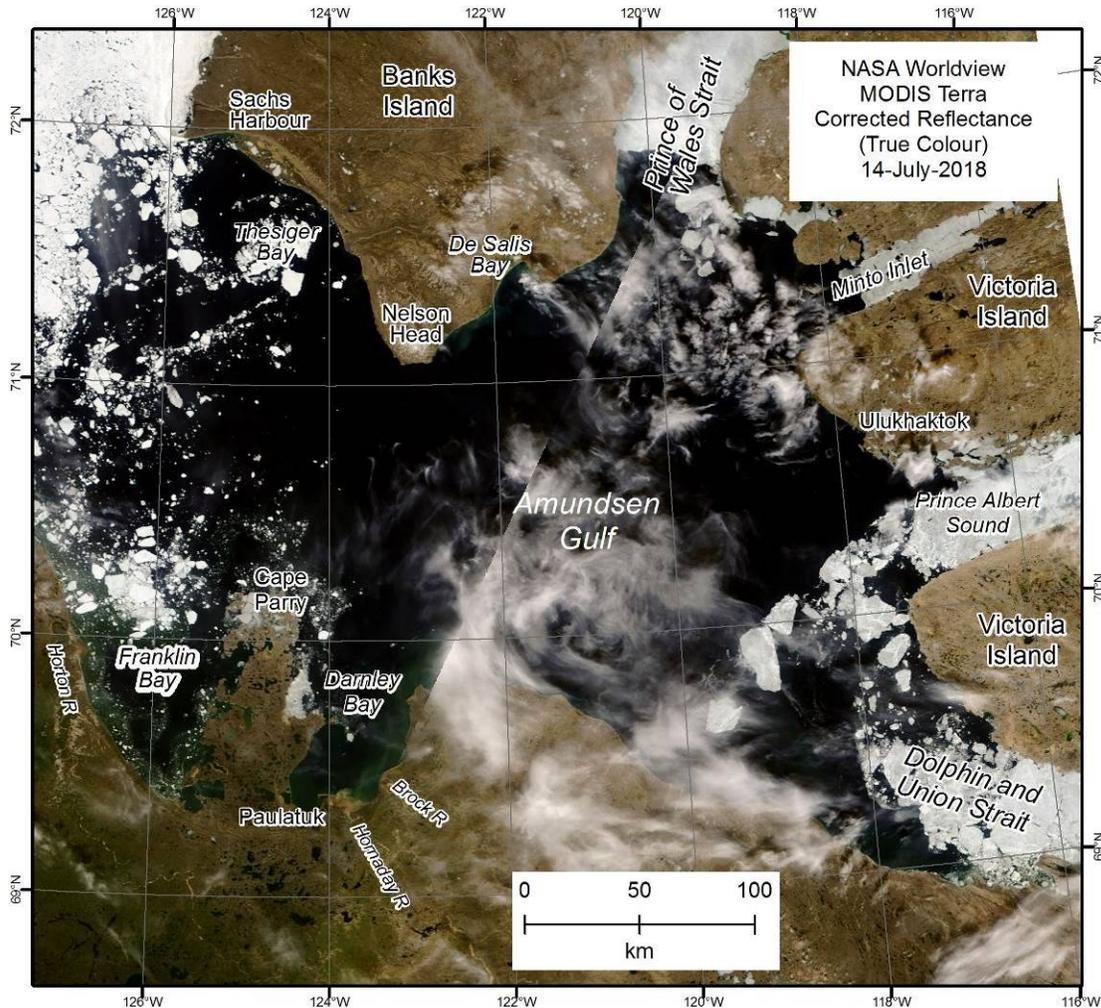


Figure 2. NASA Worldview Corrected Reflectance from Terra MODIS, showing Amundsen Gulf on 14 July 2018.

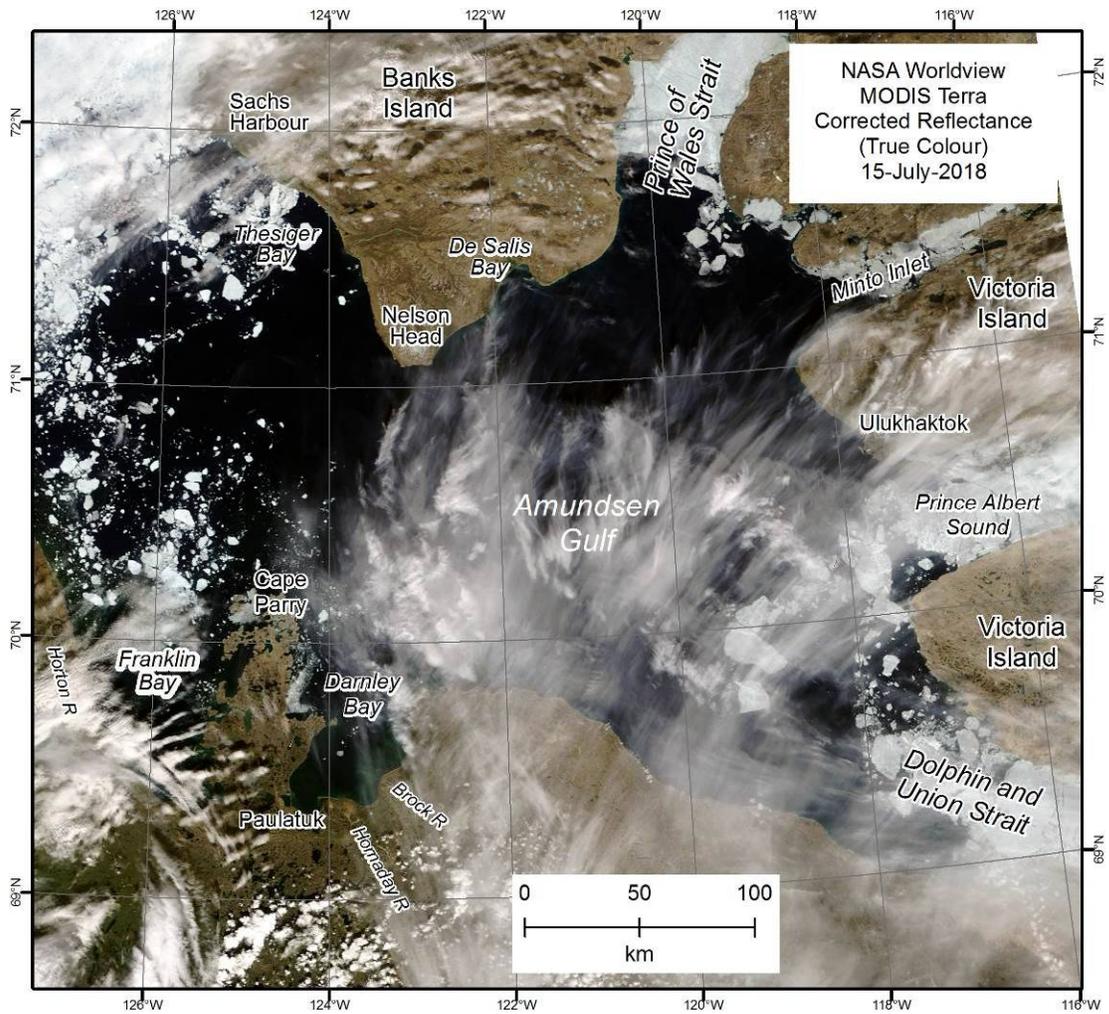


Figure 3. NASA Worldview Corrected Reflectance from Terra MODIS, showing Amundsen Gulf on 15 July 2018.