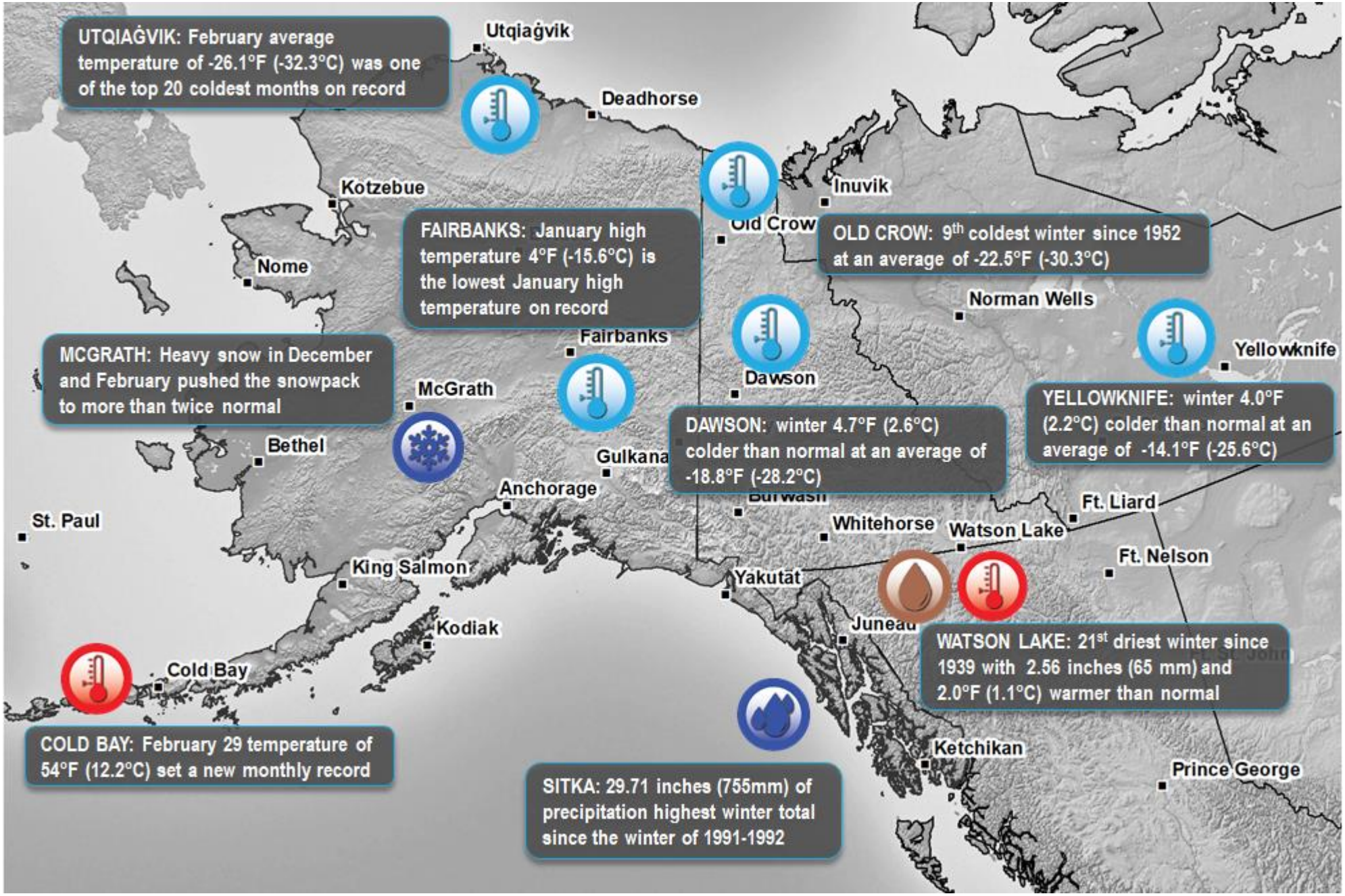
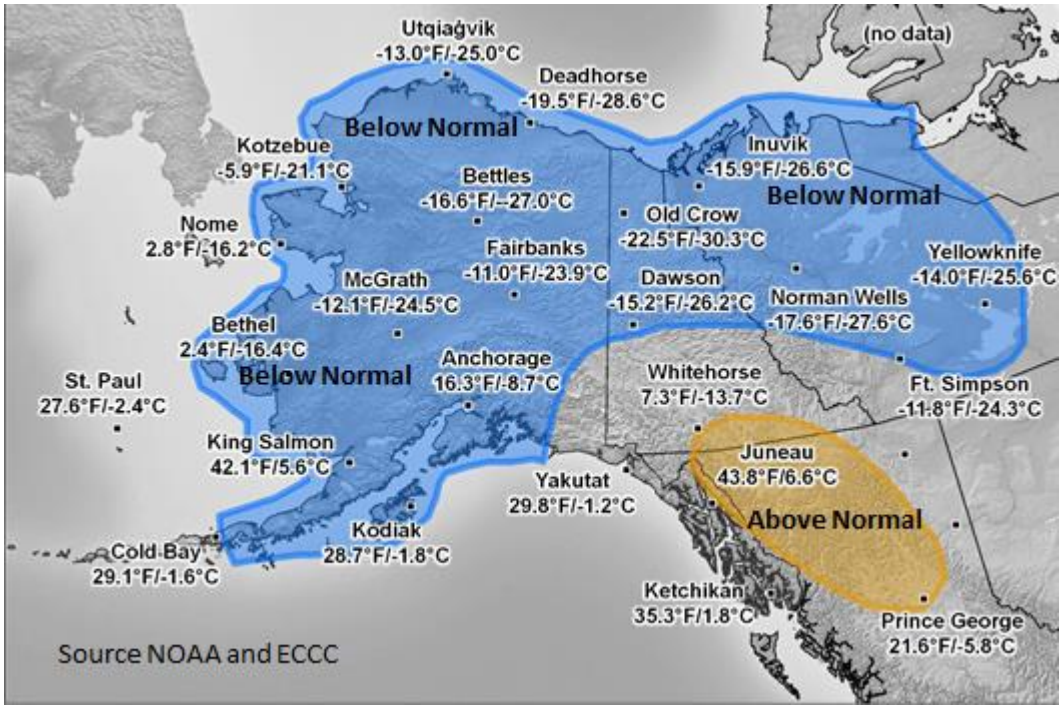
ALASKA and NORTHWESTERN CANADA

Weather and Climate Highlights and Impacts, Dec 2019 - Feb 2020; Climate Outlook March - May 2020

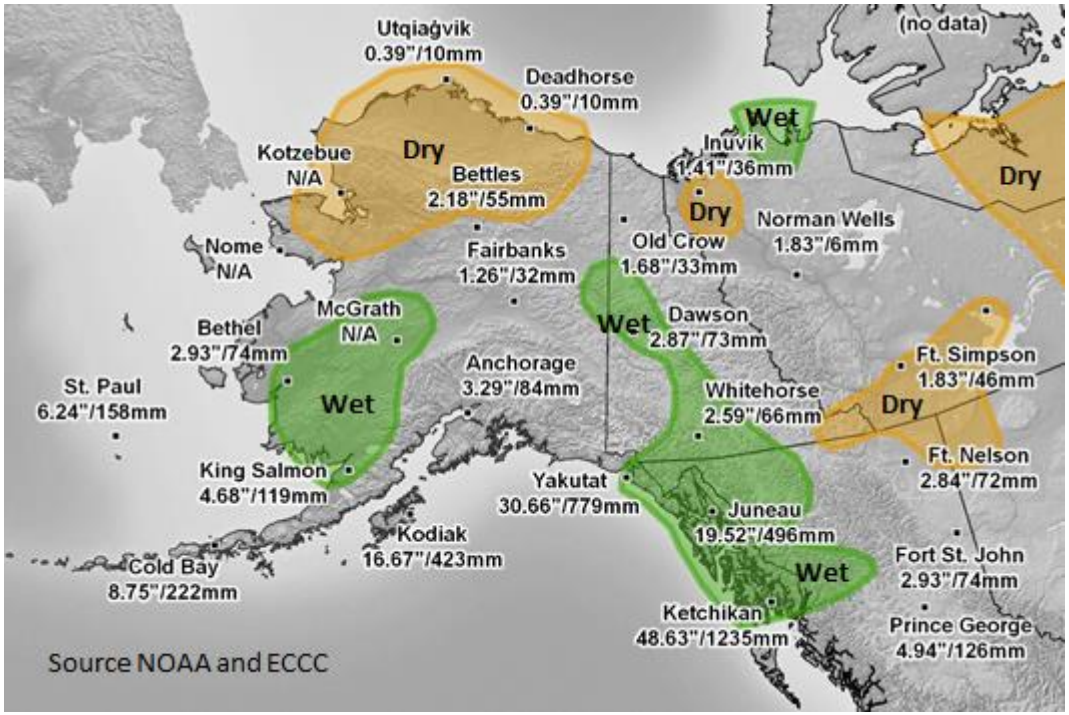
Environment and Climate Change Canada | Environnement et Changement climatique Canada



Dec 2019-Feb 2020 Temperature Averages (°F/°C) & Anomalies- Below. / .Above / Normal.



Dec 2019-Feb 2020 Precipitation Totals (inches/mm) & Anomalies- Dry / Wet / Normal.



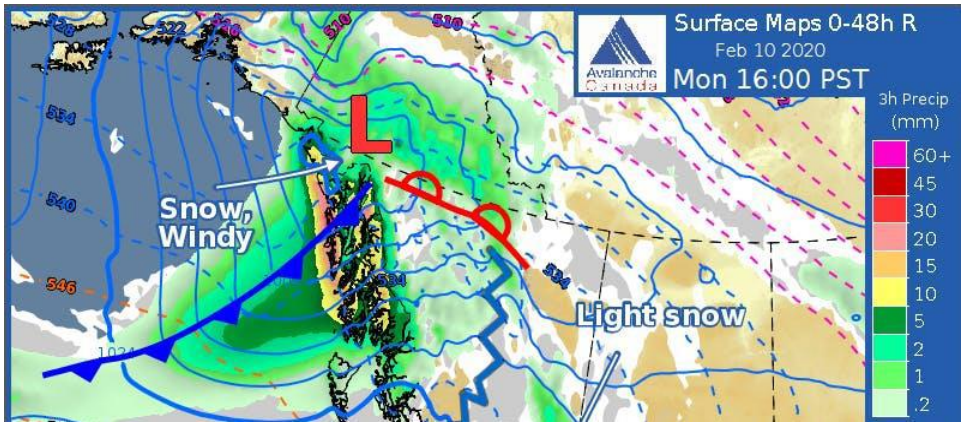
Cold in Alaska northern and central Yukon & Northwest Territories

Early December 2019 weather was warmer and drier than normal. This was largely due to the absence of El Nino effects and the presence of the warm "blob" of water (3-5°C warmer than normal) in the Pacific off the coast of BC (referred to as "Blob 2.0" on next page). As the blob dissipated the conditions changed to near normal. Snowpacks were well below normal in northwest-BC, Yukon (YT) and Northwest Territories (NT) in early December. However, early January atmospheric river events delivered precipitation that restored the conditions to normal and somewhat above normal wetness in northwest BC, southwest YT, a small area east of Inuvik and southwest Alaska.

Overall, the winter period, December 2019 to February 2020, was colder than normal in almost all of Alaska and most of central and northern YT and NT. Norman Wells experienced a winter 2.3°F (1.3°C) colder than normal averaging -17.6°F (-27.6°C). Winter in Whitehorse was at the average temperature of 7.3°F (-13.7°C) and had 38% more precipitation than normal at 1.6 inches (65.8mm). This precipitation included 10.24 inches (26cm) of snow on February 10.

At the end of February there was also a record snow accumulation of 39 inches (99cm) in Mayo. When this snow melts, it may relieve the long standing drought in the Mayo area. This past winter was the first normally cold Yukon winter in the last few years. It will likely slow down the spread of the pine beetle. Dawson, YT dipped to -54°F (-47.7°C) on January 10. From February 10-11 Whitehorse received a significant 11 inches (28 cm) snowfall (as shown in the figure below).

Yukon heavy snowfall 10 to 11 February 2020

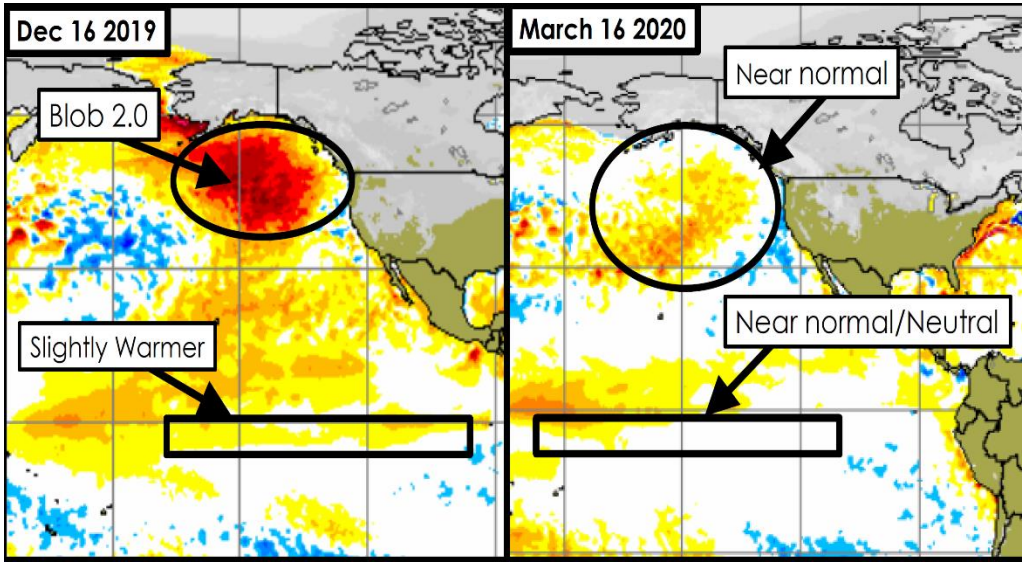


The winter storm, above, delivered 11 inches (28 cm) of snow to Whitehorse, 9.45 inches (24 cm) to Teslin, 6.69 inches (17cm) to Watson Lake and 4.33 inches (11cm) to Haines Junction. These two day totals were more than the normal February totals in Whitehorse and Teslin.

Late Winter river ice breakup in Dawson, Yukon

Photo of Yukon River at Dawson, Photo credit: B.Turcotte, Yukon Environment

Graphic showing early and late winter Pacific Ocean conditions



The so called "Blob 2.0" was an area of the Pacific Ocean where the surface temperature was 5.5 to 9°F (3 to 5°C) above normal. This area dissipated and by early January conditions on the right side of the graphic prevailed and led to a return of near normal winter conditions.

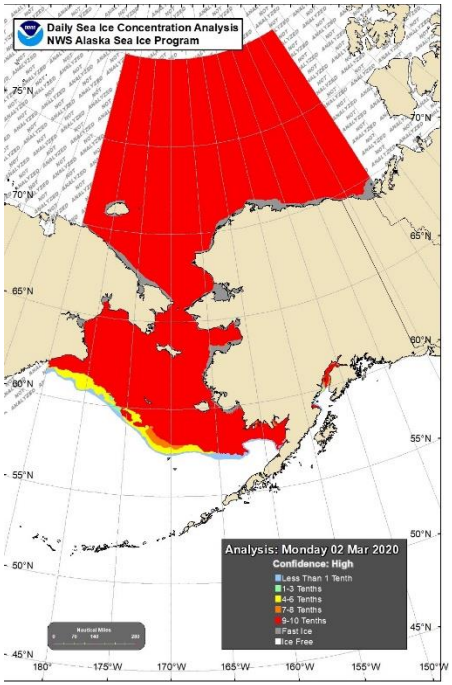
Kuskokwim River Ice Road, Alaska, Winter 2019 - 2020

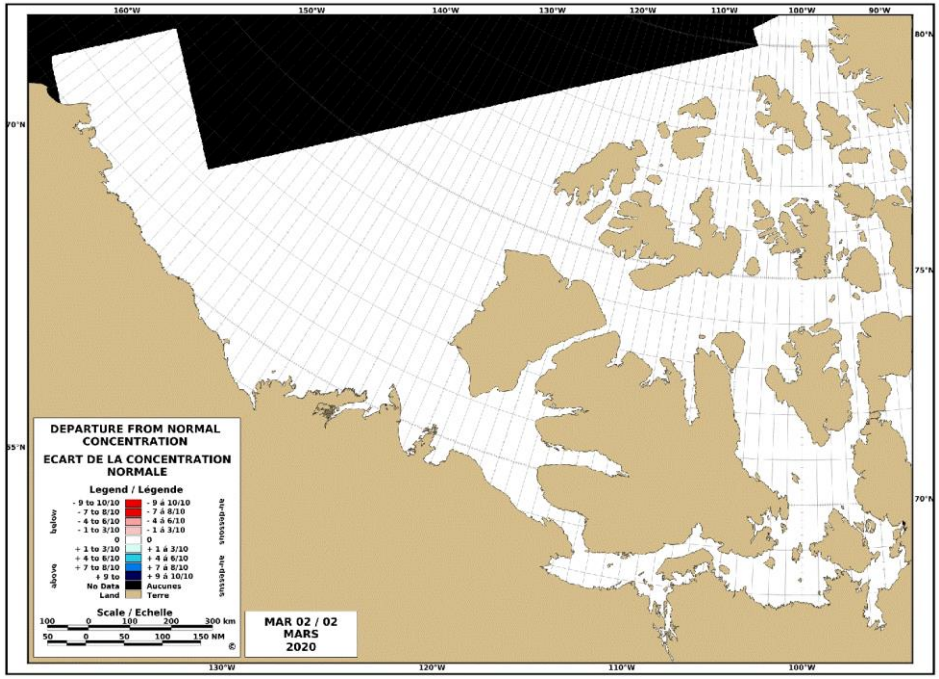
The rivers of interior Alaska are vital transportation corridors. Little permanent infrastructure exists between communities so residents depend on the seasonal freeze-up of water bodies for cultural and economic connectivity. Most years, snow machine trails are created and maintained between communities. During cold winters, like this winter, a plowed road suitable for vehicles is established. This year's road begins near Tuntutuliak, southwest of Bethel near the Bering Sea coast, and continues upriver to Sleetmute – a total distance of 355 miles (575 km). According to Alaska Public Media, it's the longest ever road on the Kuskokwim River (https://www.alaskapublic.org/2020/02/19/the-longest-ever-ice-road-has-been-plowed-on-the-kuskokwim-river-from-tuntutuliak-to-bethel/). The road even has a formal name: The Dick Nash Memorial Ice Road. For distance comparison, this year's ice road is slightly longer than the highway distance between Los Angeles and San Francisco, and also slightly longer than the highway distance between Toronto and Montreal. The road was fully available for navigation by February 15 and hopefully will be useable through mid-April.

According to University of Alaska Fairbanks researcher Allen Bondurant, a crew led by Mark Leary (Village of Napaimute) were primarily responsible for the road's construction.

Photo credit: Allen Bondurant – University of Alaska Fairbanks.

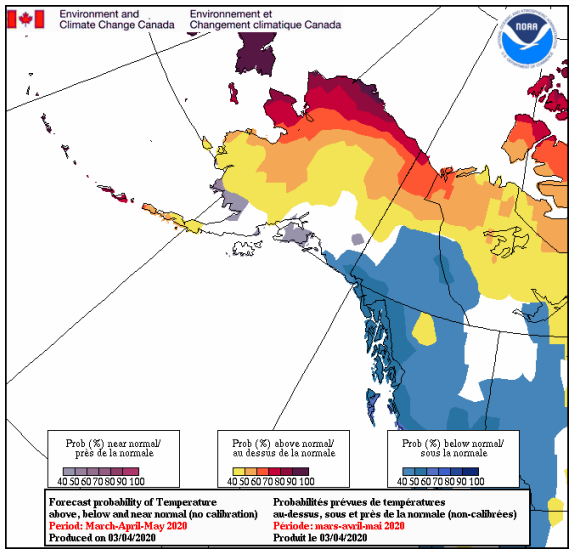
Sea Ice Concentration Conditions & Departure from Normal Conditions 2 March 2020 in the Chukchi and Beaufort Seas



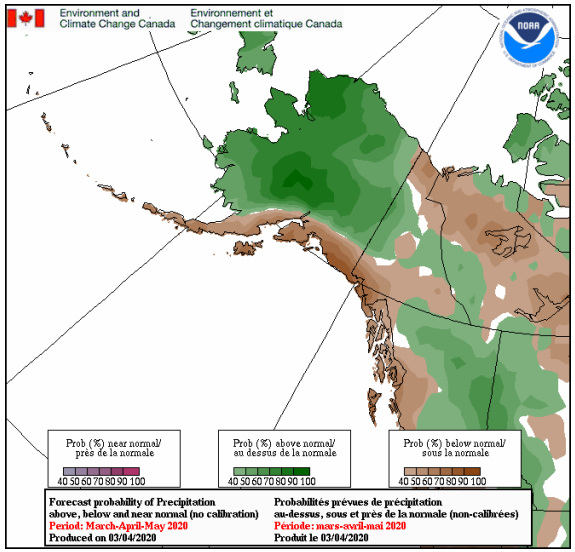


Sea ice in the Chukchi and Bering Sea began December with much lower extent than is historically typical. Ice extent exceeded 95% of the Chukchi Sea on December 22, the third latest "ice-over" in the 42 year satellite record. Sea ice on the Bering Sea grew out from the Alaska coast during December but was slower to move through Bering Strait and did not reach the north shore of St. Lawrence Island until about New Years Eve. Ice extent continued to increase in early January but growth was halted by a couple of storms mid-month. Thereafter the ice extent expanded, and was slightly above the 30-year average during the last half of February. However, ice had not reached Pribilof Islands by the end of February. Ice conditions on the Alaska coast north of the Bering Strait were much better than the past couple of years. In Canada, the Western Arctic sea ice reached maximum extent in January despite a slower than normal freeze-up during the fall. Complete ice coverage continued during the remainder of winter with near normal ice thickness due to slightly below normal temperatures.

Temperature Outlook: March - May 2020



Precipitation Outlook: March - May 2020



A combined Canada - USA forecast model is used to provide a temperature and a precipitation outlook for March to May 2020.

The temperature outlook map shows that central and northern Alaska north and central YT and NT have a 40-90% chance of above average temperature (yellow-brown colors). The highest probabilities are in the northern coastal parts of Alaska, including the western half of the Aleutian Islands and northern Canadian arctic islands. Exceptions are the southern half of YT and most of central and southeastern NT where near normal or slightly below normal temperatures are probable.

The precipitation outlook map shows that the majority of Alaska, BC and central NT & YT, along with most of the arctic islands, have a 40-100% chance of above normal precipitation (green areas). Southern coastal Alaska, most of southern YT & northern NT and central west BC, will likely have below normal precipitation (brown areas) with central northern BC and most of northern Alberta having a 40-70% chance of above normal precipitation.

Content and graphics prepared in partnership with the Alaska Center for Climate Assessment and Policy and Environment and Climate Change Canada.

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