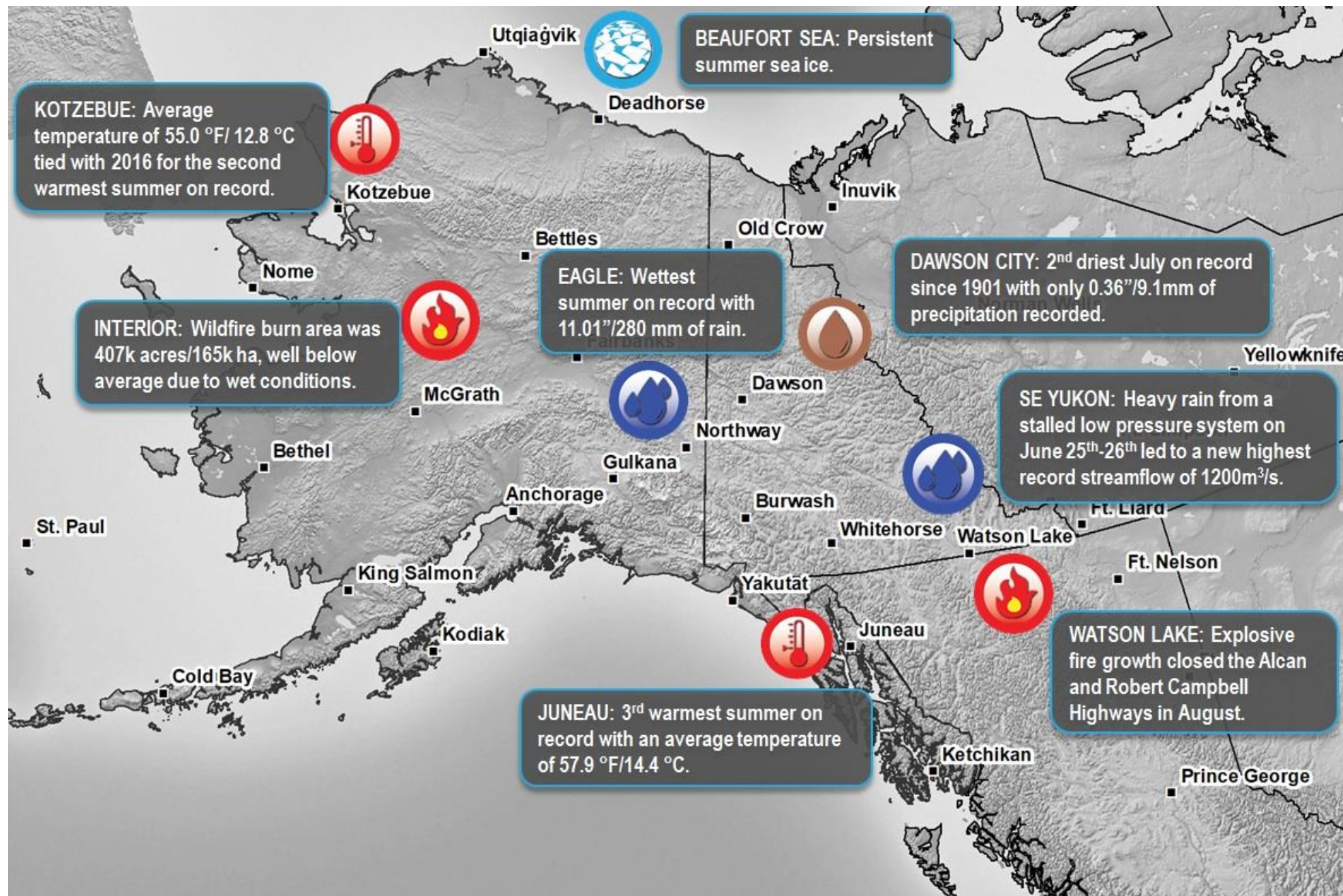
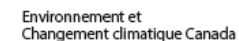


ALASKA and NORTHWESTERN CANADA

Weather and Climate Highlights and Impacts, June-August 2018; Climate Outlook Oct.– Dec. 2018



Temperature & Precipitation, June-August 2018

Between June and August 2018, the western portion of Alaska, the southernmost part of the Yukon, and northern British Columbia experienced warmer than average conditions. The portion of Alaska and the Yukon along the coast of the Beaufort Sea, along with most of central Northwest Territories (NWT) saw below normal temperatures, while the central parts of Alaska and the Yukon, along with the south-western part of the NWT experienced near normal temperatures during that same time period. Total precipitation between June and August 2018 was above average over the majority of Alaska, the Yukon and the western part of the NWT, while below normal precipitation was observed over small regions around the southern Yukon/NWT border, and the northern coast of British Columbia.

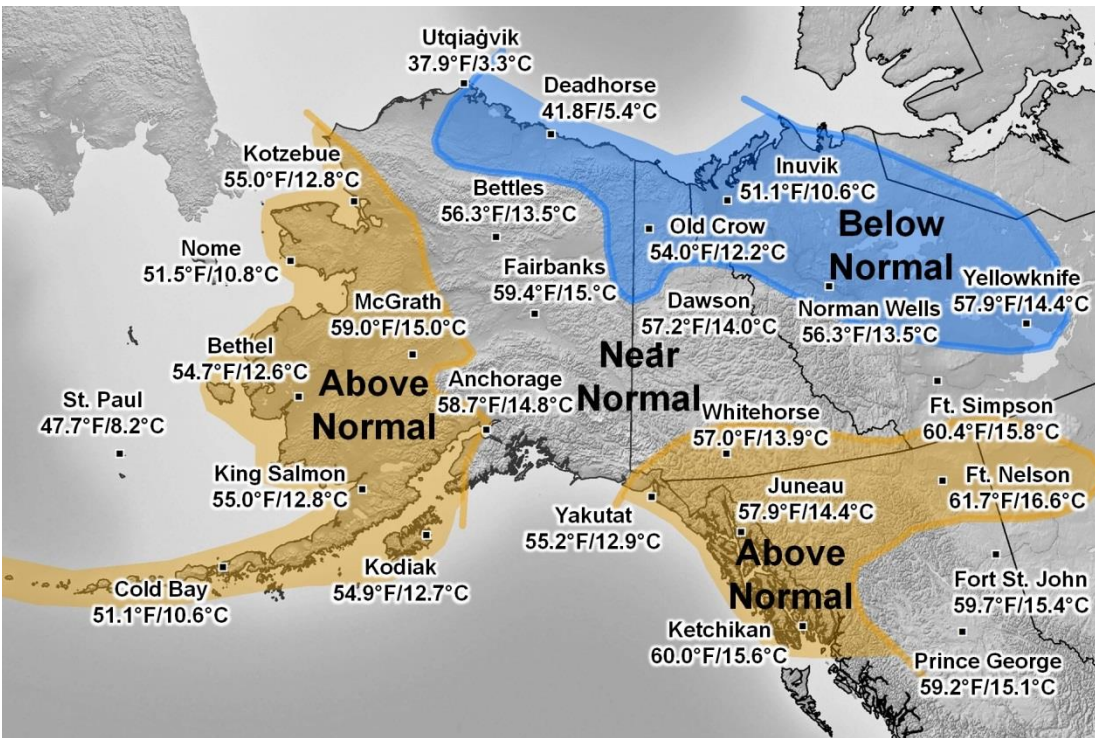


A warm and dry summer in the southeastern Yukon caused several wildfires. The photo above shows the Watson Lake, Yukon, wildfire on August 21st, 2018. Photo courtesy of the Yukon Wildland Fire Management.

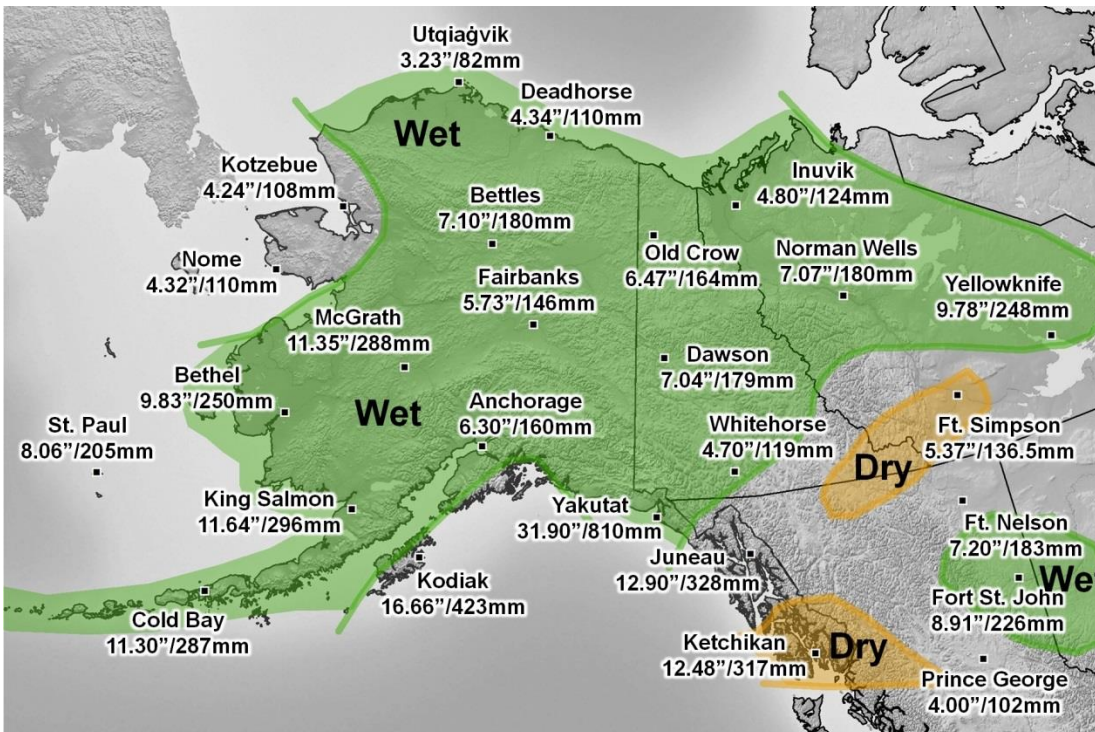


Photo of flooding near Tetlin, Alaska, in late June 2018. Photo Credit: National Weather Service.

For the second summer in a row, high water on the Tanana River during June accelerated the ongoing process of the cutting of a new channel alignment due to erosion. The new channel flooded the access road from Tetlin to Alaska Highway. Area residents improved a secondary access road that had been started the previous summer, and so were able to get in and out of the community by car and truck. This proved important in late July when the Taixtsalda Hill wildfire started not far south of Tetlin.



Source: NOAA and ECCC



Source: NOAA and ECCC

Fire season in the Yukon and northern British Columbia



The photo shows the South Stikine River fire on August 6th, 2018. Handout photo provided by the BC Wildfire Service.

A series of upper-level ridges (high pressures) from July through the end of August brought above normal temperatures and little precipitation to much of the southern Yukon and northern British Columbia (BC). These persistent warm and dry conditions over the region caused the wildfire season to extend one month longer than normal. The situation was severe as several large wildfires burned in close proximity to towns and highways.

Strong westerly winds on August 13th caused explosive growth of fires in the Watson Lake, Yukon and Lower post, BC areas. These fires forced the closure of the Robert Campbell and Alaska highways and caused an evacuation order for Lower Post, BC on August 21st. The relatively strong westerly winds continued for the next week, severely impacting firefighting efforts.



An L188 Electra air tanker fights wildfires in the vicinity of Watson Lake, Yukon on August 21st, 2018. Photo courtesy of the Yukon Wildland Fire Management.

The Alkali Lake and South Stikine River fires in northwestern BC caused evacuation orders of the town of Telegraph Creek, BC and the Tahltan Nation Lands, BC. A total of 44 primary residences, 69 outbuildings, 7 cultural historical buildings, a Church, and a Headstart/day care were lost in the fires.

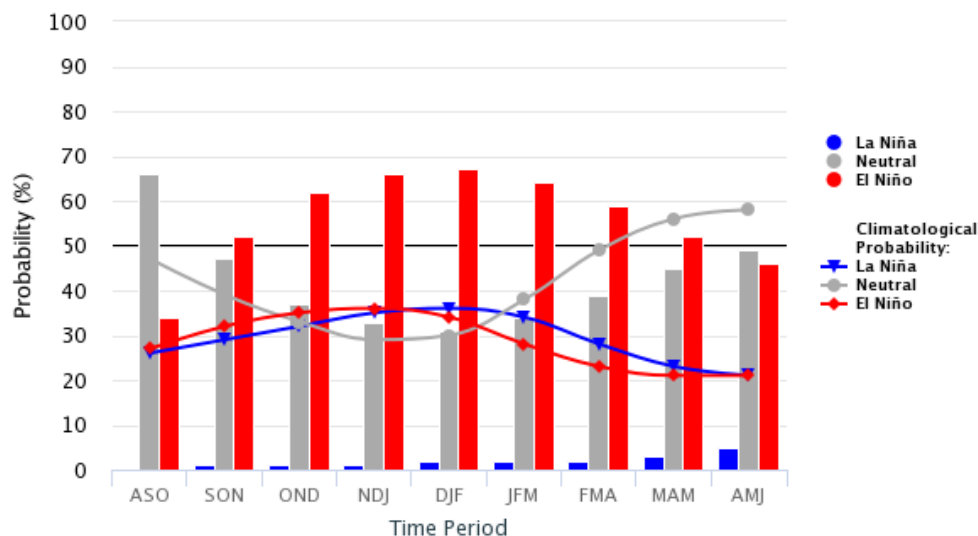
Wildfires in the area also caused the Air Quality Health Index to climb to Very High Health Risk for two to three weeks throughout northwestern BC and the Yukon, including Fort St. John, Prince George, Burns Lake, and Watson Lake.

In contrast, this same weather pattern that brought large fires in northern BC and the Yukon lead to less than average fire activity in Alaska.

El Niño–Southern Oscillation forecast

Early-Sep CPC/IRI Official Probabilistic ENSO Forecasts

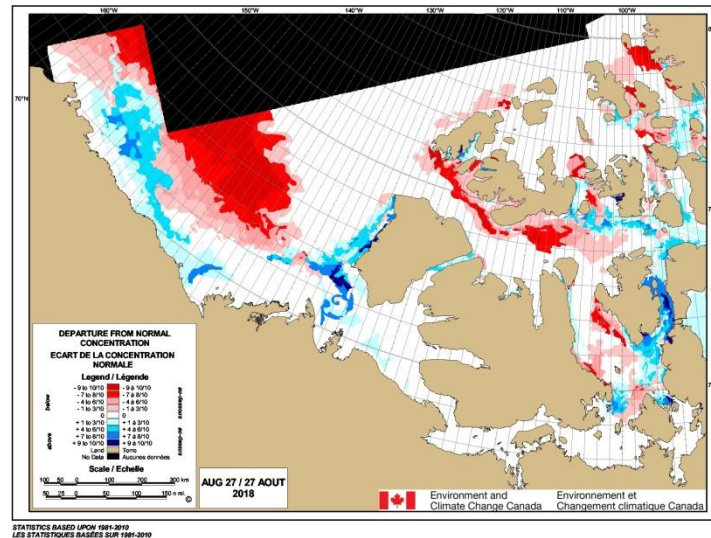
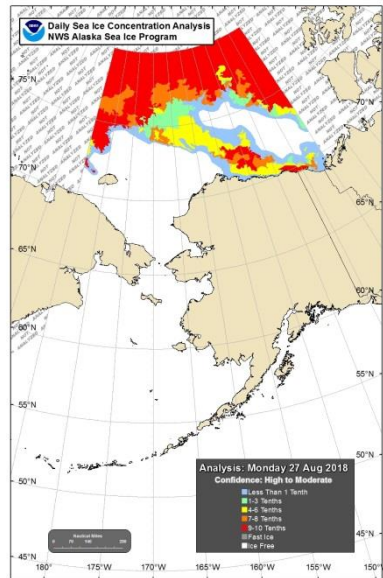
ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5 °C to 0.5 °C



The figure to the left shows the quarterly forecast of the status of El Niño, La Niña, and neutral conditions between August 2018 and July 2019 based on the official El Niño–Southern Oscillation (ENSO) probability forecast from the Climate Prediction Centre (CPC – NOAA)/International Research Institute (IRI) dated early-September 2018. Letters on the x-axis denote the first letter of each month. For example, ASO represents August–September–October. The prediction is based on the NINO3.4 index (120–170W, 5S–5N) sea surface temperature (SST) anomaly. This forecast has slightly less chances of an El Niño this winter than the earlier summer forecast.

Although El Niño is a meteorological phenomenon taking place in the southern Pacific Ocean, its occurrence can affect the cold season climate of Alaska and northwestern Canada. During an El Niño event, a higher number of storms than average travel northward from the mid-latitudes into the Gulf of Alaska and adjacent British Columbia, bringing warm air into the region. Given that El Niño conditions are likely to develop this winter, northwest Canada and much of Alaska have increased chances for above normal temperatures this upcoming winter.

Sea Ice Conditions at the end of August 2018 in the Beaufort and Chukchi Seas

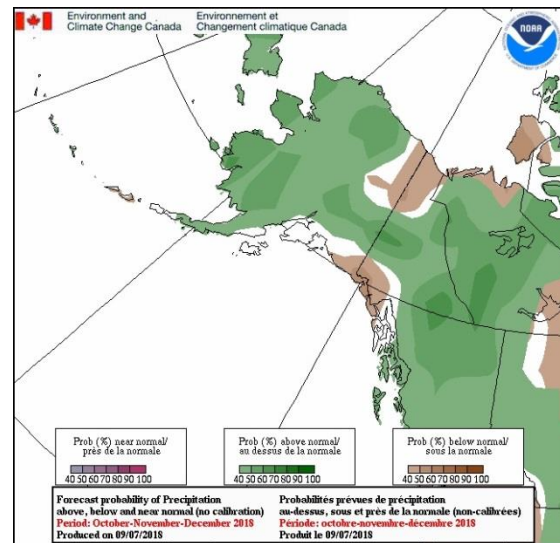
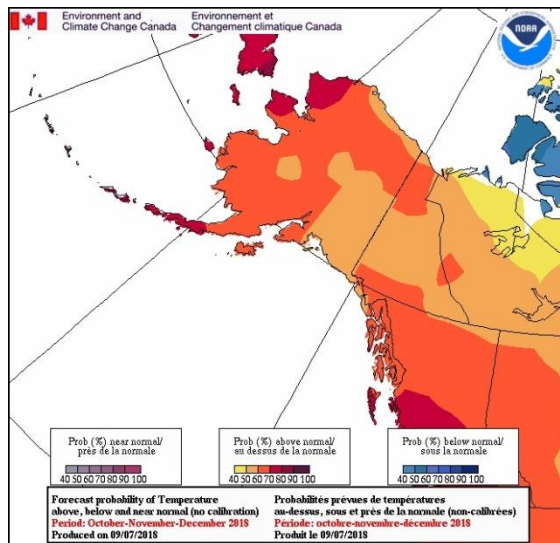


After an extremely early start to the melt season in the southern Chukchi Sea, summer ice melt near Alaska was much slower than recent years. June featured persistent cloudy and cool weather, slowing melt. July was milder with more storminess which increases ice melting, but it was not until August that melt really accelerated. Nonetheless, there was still considerable ice in the Beaufort Sea near the Alaskan coast east of Cape Halkett by late August. The ice was sufficiently consolidated that non ice-hardened vessels had to wait for open channels to develop. The ice was well north of the Alaska coast in the Chukchi Sea at the end of August.

Overall, ice conditions in the Beaufort Sea area are currently about 3-4 weeks ahead of normal in terms of ice melt; on the other hand, the area along the Alaskan Coast represents conditions that are 1-2 weeks later than normal. Nearing the minimum ice extent for the 2018 ice season, large areas of ice that have melted during the summer season are represented by areas in red on the top right figure. However, we also see areas of ice that have lingered longer than normal, notably north of the Alaskan coast, as represented by areas in blue on the top right figure.

Temperature Outlook: Oct.-Dec. 2018

Precipitation Outlook: Oct.-Dec. 2018



A combined Canada-USA climate forecast model is used to provide temperature and precipitation outlook for October-December 2018.

The temperature outlook for October through December 2018 shows that the majority of Alaska and northwest Canada have a 40-90% chance of above average temperature (warm colors). Banks Island in the NWT, as well as the portion of Victoria Island showing on the map, on the other hand, shows a 40-50% chance of below normal temperatures (blue areas).

The precipitation outlook for October through December 2018 shows that most of Alaska, the Yukon, and the northwest part of the NWT have a 40-60% chance of above normal precipitation (green areas). Isolated pockets along the coast of the Beaufort Sea, the southern Yukon/Alaska border, and the Great Slave Lake area have a 40-50% likelihood of below normal precipitation (brown areas).

Content and graphics prepared in partnership with the Alaska Center for Climate Assessment and Policy, NOAA National Weather Service Alaska Region, and Environment and Climate Change Canada.

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