

ALASKA and NORTHWESTERN CANADA

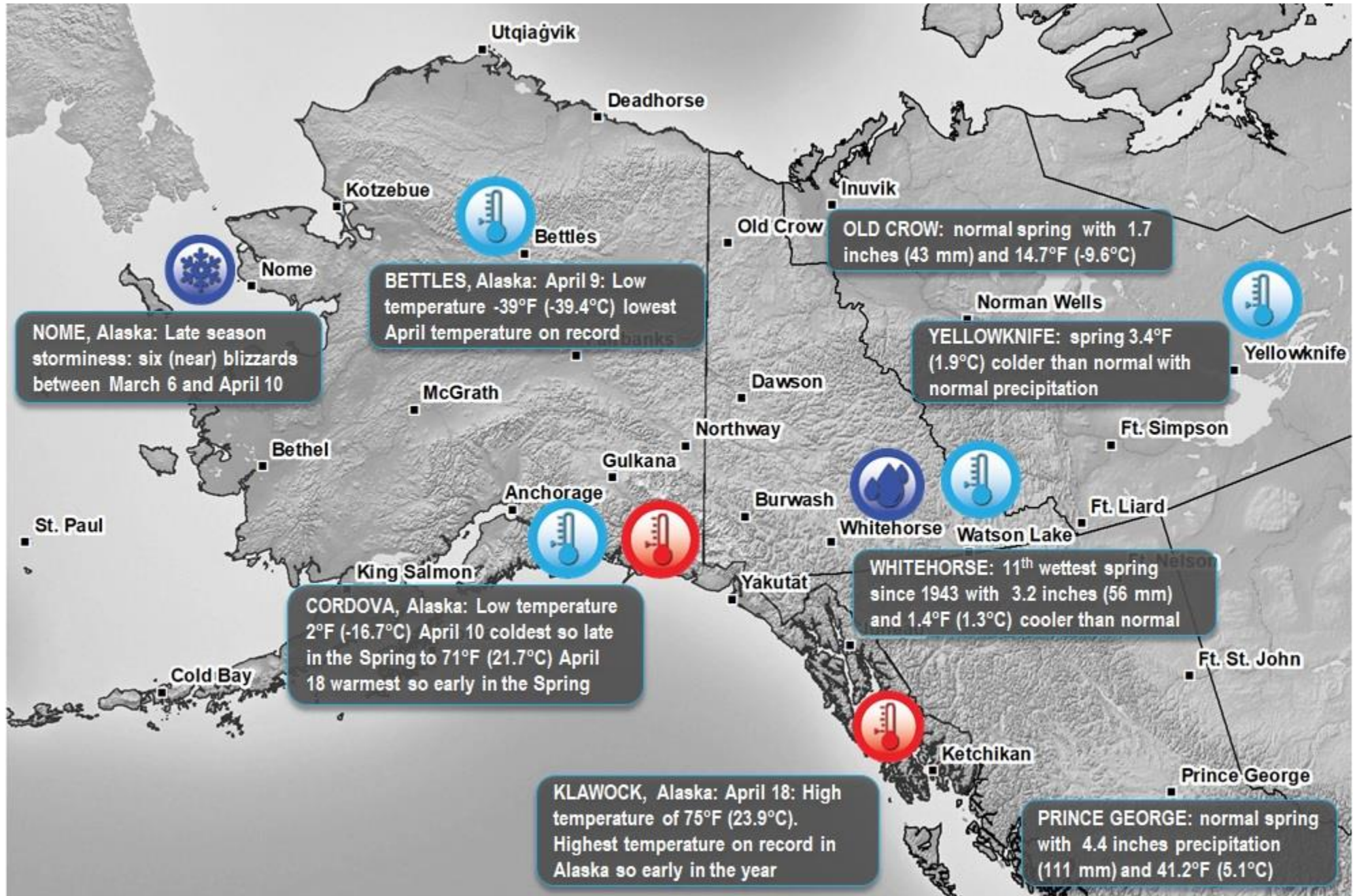
Weather and Climate Highlights and Impacts, March - May 2021

Climate Outlook, July - September 2021

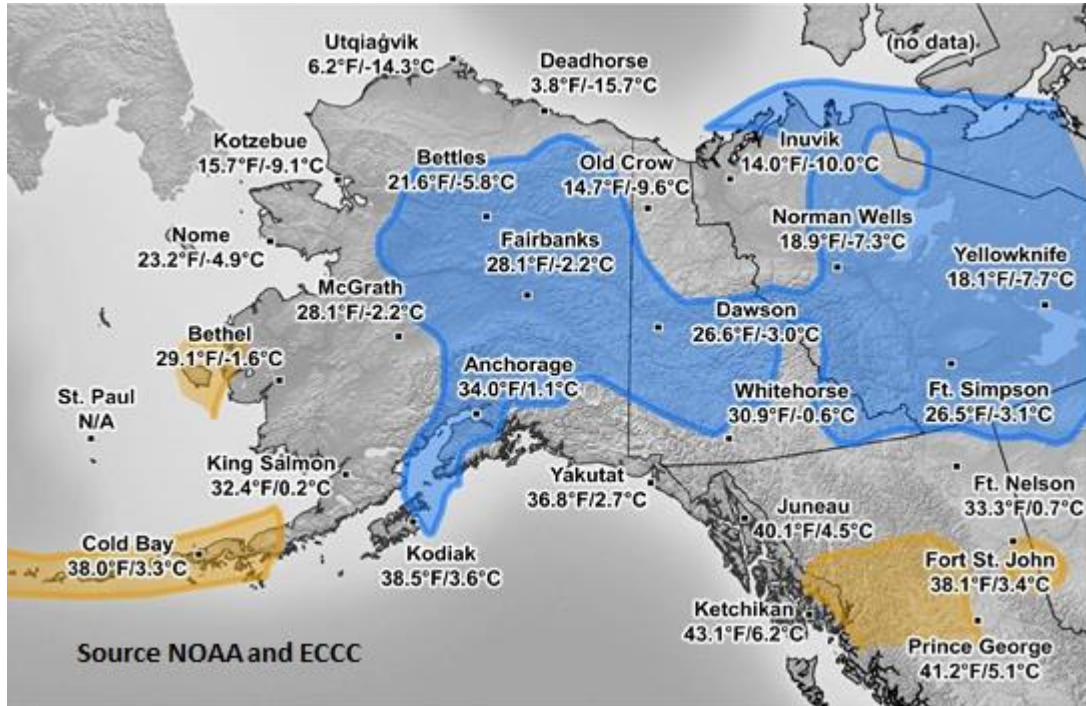


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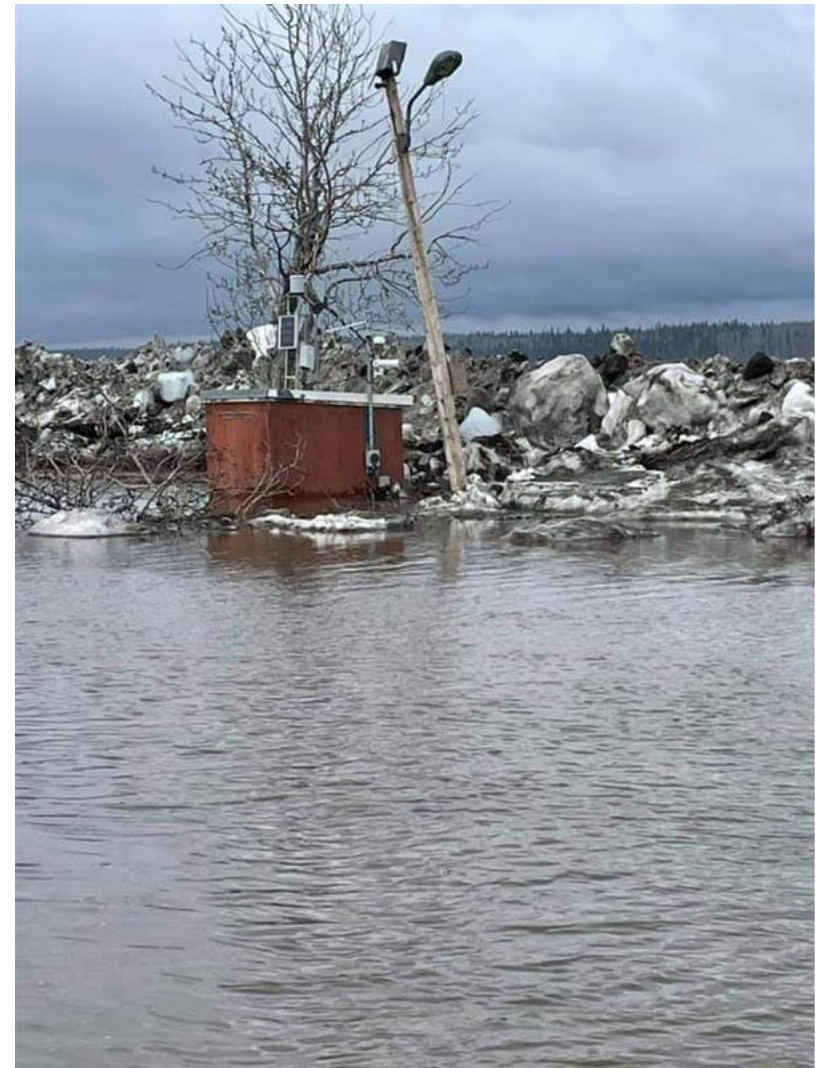


March - May 2021 Temperature Averages (°F/°C) & Anomalies- **Below** / **Above** / Normal.

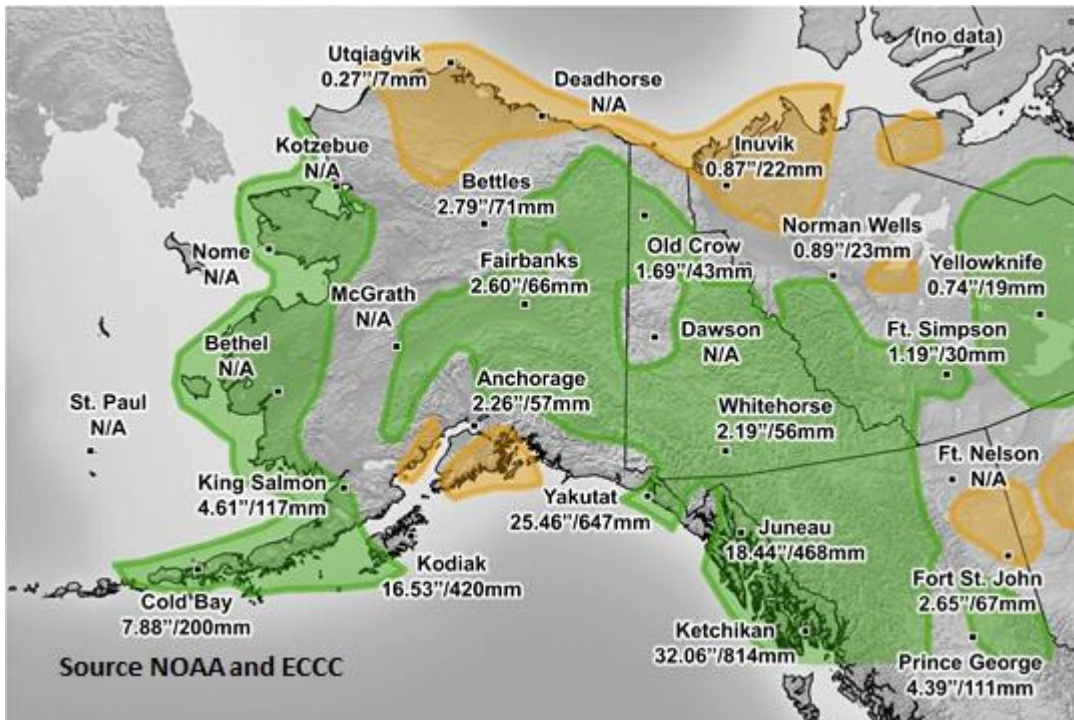


Ice damage to river flow station at Fort Simpson

Every year during ice breakup, a number of river flow gauges stop transmitting. It is usually the orifice line, which contains the water level sensors, that gets ripped out by ice or plugged with slush and debris. The technicians can normally fix this easily when they are able to access the gauge. In Fort Simpson this year, our entire gauge station was wiped out. All of the equipment and the shelter were damaged.



March - May 2021 Precipitation Totals (inches/mm) & Anomalies- **Dry** / **Wet** / Normal.



River Ice breakup damage to the Mackenzie River flow gauge station near Fort Simpson, mid-May 2021, Source: Water Survey of Canada, ECCC.

Telegraph Creek, Highway 51, Spring 2021



**Highway 51 washout near Telegraph Creek, BC, April 14, 2021.
Photo credit: Emergency Management, British Columbia**

In the summer of 2018, the community of Telegraph Creek was devastated by the Alkali Lake wildfire. Approximately 125,000 ha of land burned, 21 homes and numerous culturally significant buildings were destroyed, and the resulting burn scar left an unstable landscape. Fast-forward to winter 2020-2021 when northwest BC was pummeled by a myriad of winter storms, building a record snowpack 135% of normal by April 1, 2021. A rapid change from below to above normal temperatures in early April led to more rapid melt than usual. Unstable soils and plentiful moisture caused a major road washout on April 14, cutting off the communities of Telegraph and Glenora from road transport of groceries, fuel and medical transport. Since the initial washout, warm temperatures and the ensuing snowpack melt, further exacerbated by precipitation, have continued to threaten the road with more washouts and sinkholes, Damage to bridge structures is possible. Weather briefings and assistance from the BC River Forecast Centre will continue in the weeks ahead to aid these communities.

Buckland Alaska, Spring 2021, Flooding



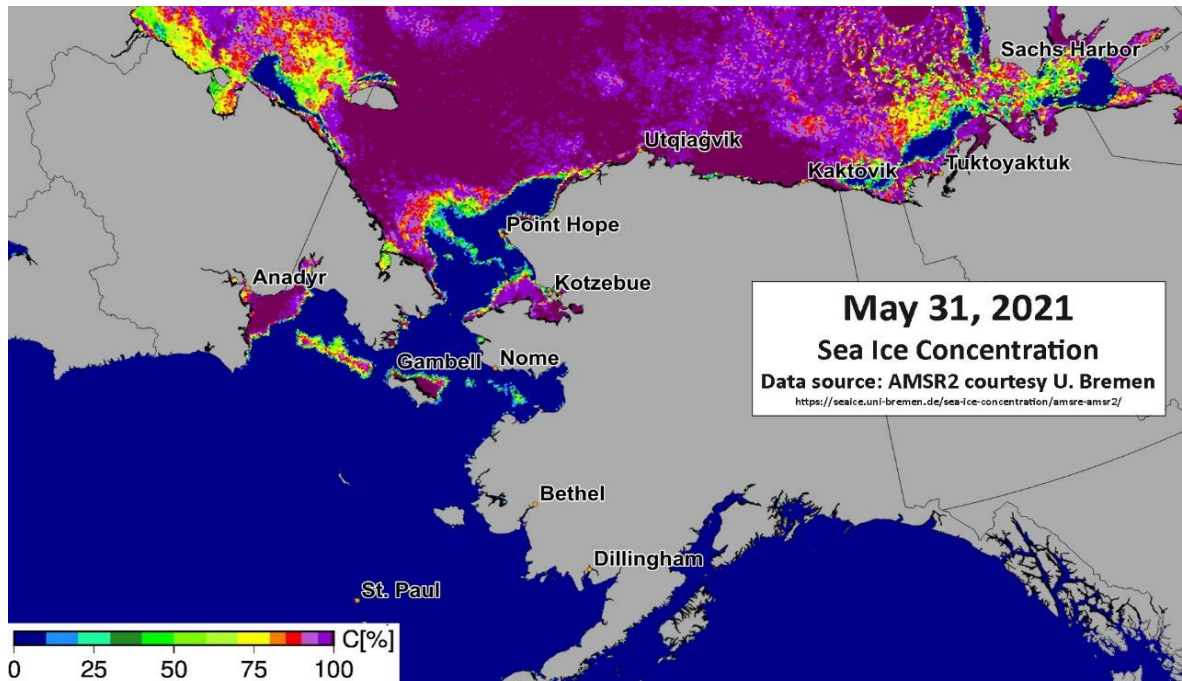
**Aerial view of Buckland, AK, May 13, 2021.
Photo credit: Alaska Public Media/John Jones**

Buckland, Alaska, about 75 miles southwest of Kotzebue, is very susceptible to spring break-up flooding due to the presence of a sharp bend in the Buckland River a short distance downriver of the community. Sharp bends and switchbacks are a favored location for ice jams to form.

This spring, a long-lived ice jam combined with above normal snowpack caused severe flooding May 12 to 17. Virtually the entire community was flooded with water that was up to five feet (1.5 meters) deep in spots. Impacts to the water treatment plant required a "boil water" notice and some evacuations were required. Displaced stove oil barrels have left some homes without a source of heat.

The Alaska Governor declared a disaster on May 17, opening access to state and federal relief funding.

Sea Ice Concentration Conditions 31 May 2021 in the Bering, Chukchi and Beaufort Seas

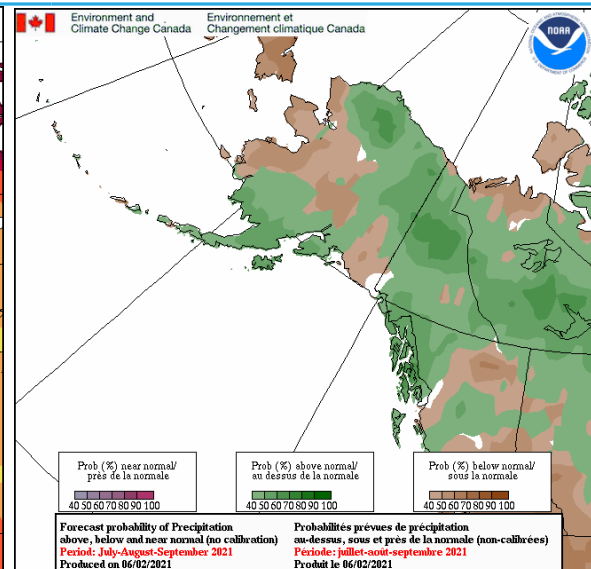
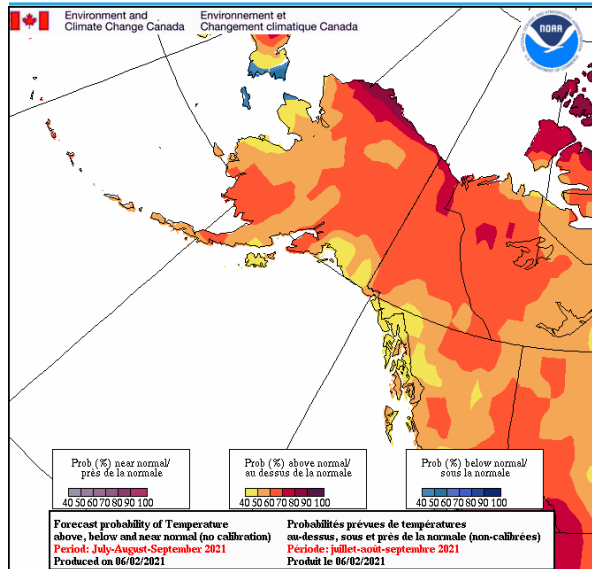


Sea ice in the Bering Sea reached its greatest extent in early March but it was only 81% of the long term average. However, ice extent was slower to decrease later in the spring than in recent years. As a result, the average daily sea ice extent for May was close to normal and ice conditions in the northern Bering Sea region supported successful hunting and fishing in many communities.

Leads in the sea ice development in April and May along the Alaska Chukchi Sea coast, as is typical, and open water offshore expanded during the second half of May. In the Beaufort Sea north of Alaska, sea ice remained in place except for some fracturing of the pack ice away from the shorefast ice during May. Also, during the last week of April and into May, periodic southeasterly winds caused the pack ice to drift towards the northwest from Baillie Island to northwest of Herschel Island. The area within about 60 nautical miles of the fast ice edge was covered with a mix of open water to 3/10 ice. The leading edge of old ice was located near Point Barrow to about 130 nautical miles northwest of the Tuktoyaktuk Peninsula.

Temperature Outlook: July - Sept 2021

Precipitation Outlook: July - Sept 2021



A combined Canada - USA forecast model is used to provide a temperature and a precipitation outlook for July - September 2021.

The temperature outlook map shows that all of Alaska and northwest Canada have a 40 to 80% chance of above average temperature (yellow to dark red colors), with the highest probabilities found in the northern coastal parts of Alaska and the NT arctic Islands.

The precipitation outlook map shows that most of Alaska and northwest Canada have a 40 to 70% chance of above average precipitation (green colors). Northwest, central Alaska, northern coastal NT and northeast BC have a 40 to 70% chance of below average precipitation (brown colors).

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

ALASKA REGION PARTNERS: Alaska Climate Research Center, Alaska Climate Science Center, National Snow and Ice Data Center (NSIDC), NOAA / NWS Weather Forecast Offices, NOAA National Weather Service Alaska Region, NOAA / NESDIS / NCEI, Scenarios Network for Alaska + Arctic Planning.

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