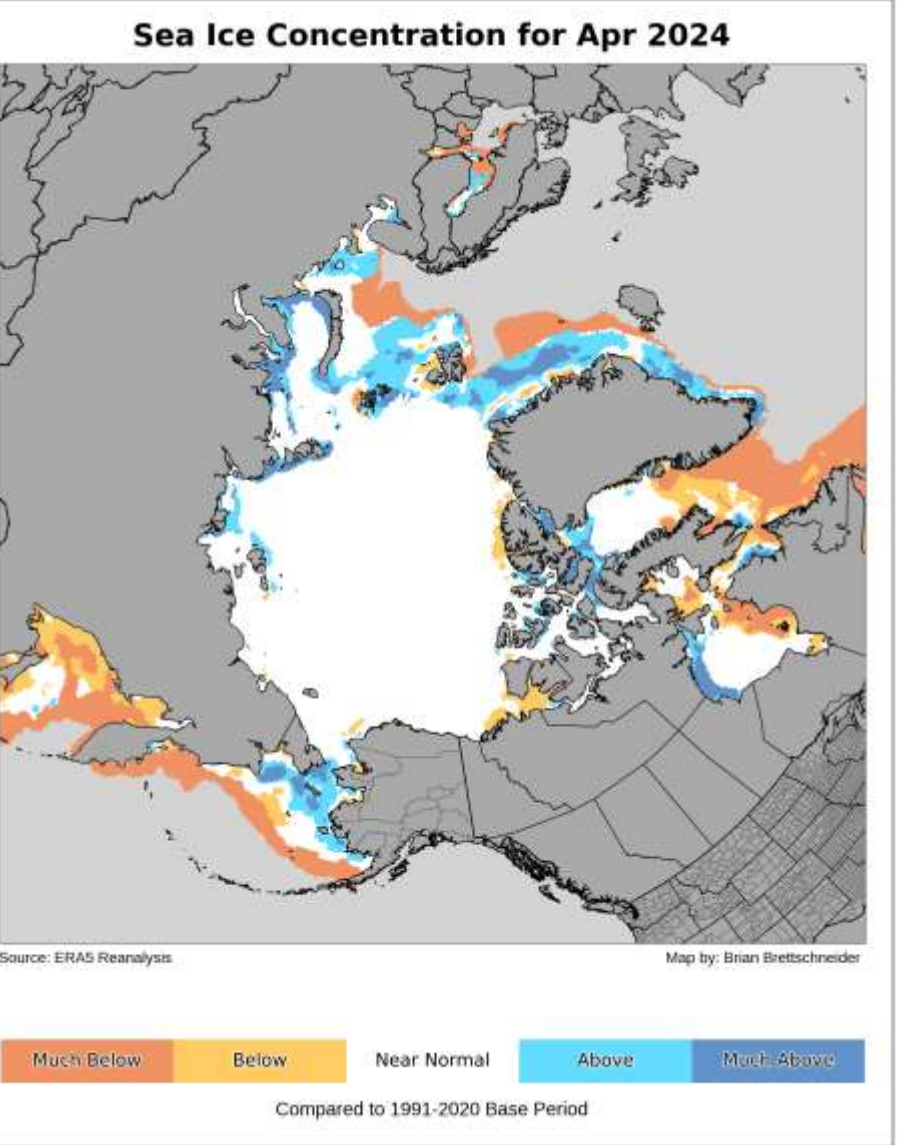# **Below, Near, Above Normal**

Note: This is a categorical analysis based on either a 30-year or 18-year base period. The Much Above category is in the top 10%, Above Normal is the rest of the top 1/3rd, Near Normal is the middle 1/3rd, Much Below is the bottom 10%, and Below Normal is the rest of the bottom 1/3rd.
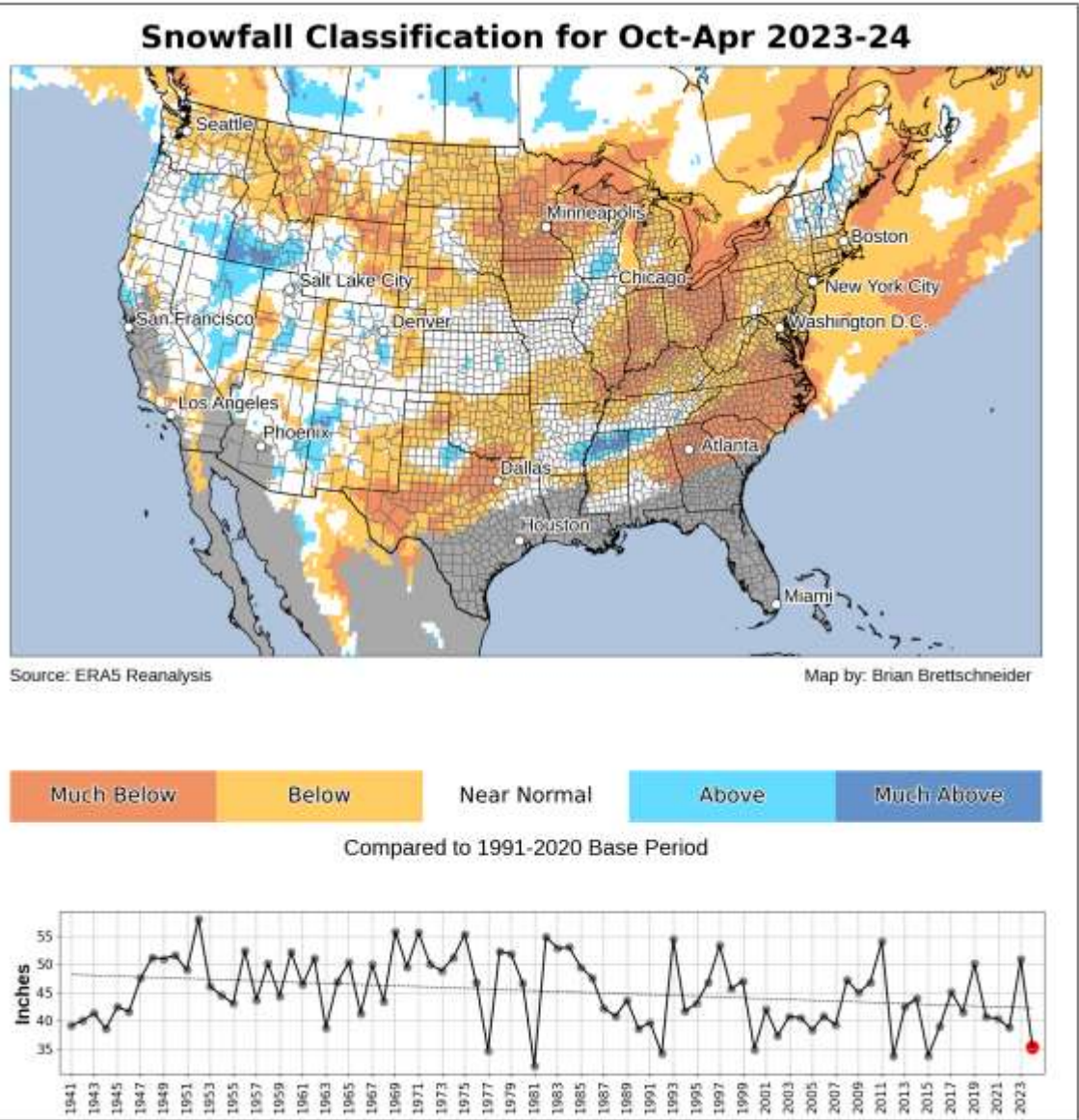
North Polar April 2024 Sea Ice Categories

Uses the 1991-2020 baseline.
If 1991-2020 concentration is >0% and current year
 is 0%, it is mapped as Much Below.

Sea Ice Concentration for Apr 2024

Source: ERA5 Reanalysis

Map by: Brian Brettschneider

Much Below | Below | Near Normal | Above | Much Above

Compared to 1991-2020 Base Period

Select Map Area (1-10) [5 ▾]

1 = Global (time: 0:30 to 1:20)
2 = U.S./Canada (time: 0:30 to 1:40)
3 = Contiguous U.S. (time: 0:30 to 1:50)
4 = Alaska (time: 0:30 to 1:30) ☐ Indigenous names
5 = Alaska and NW Canada (time: 0:30 to 1:15)
6 = Polar (time: 0:30 to 1:30) [55] to 90) North ☑
7 = Europe (time: 0:30 to 1:20)
8 = Pacific Northwest (time: 0:30 to 1:35)
9 = U.S. Pacific Islands (time: 0:30 to 1:25)
10 = Country, State, Province, or Box (all Plate Carree)
[Global]
  Countries (e.g., Country New Zealand)
  States (e.g., State New York)
  Canada provinces/territories (e.g., Canada Manitoba)
  Box, N. Lat, S. Lat, W. Lon, E. Lon (Example: Box,45,25,-120,-50)

Select Map Type (1-9) [3 ▾]

1 = Ranks (since 1940)
2 = Departure From Normal (not clouds/wind)
3 = Below, Near, Above Normal (slower)
4 = Target Year Values (not wind)
5 = Normal Values (not wind)
6 = 50 or 75-Year trend (8-10 mins for new run)
7 = 50-Year ENSO Season Correlation (6-10 mins for new run)
8 = SPI (precip auto selected; 8-mins for new run)
9 = Composite ENSO or List of Years (6-mins for new run)

Ranks / trend start year [1940 ▾]

Note: For periods that wrap around New Year,
the start year should by the year at the start
of the period. For 1974-75 to 2023-24, (50 years),
enter 1974 here (end year should be most current year).

Choose Map Theme (1-8) [8 ▾]

Available themes: **1 = t2m, 2 = precip, 3 = snow, 4 = sst ,
5 = dewpt, 6 = clouds, 7 = wind, 8 = seaice**

Map Elements (Check top row for most N. American maps)
Lower 48 States ☑ U.S. Counties ☑ Canada Provinces ☑
Major Rivers ☐ U.S. Interstates ☐ Gridlines ☐
NWS WFOs ☐ NPS Units ☐ Climate Divs ☐
Major World Cities ☐ World Roads (adds 1:00) ☐

Last month to start evaluation (e.g., 2 for Feb): [4 ▾]

Number of months (up to 12) to evaluate (e.g., 3 for Dec-Feb): [1 ▾]

Year of last month for assessment: [2024]

Note 1: Do not select a date in the future!
Note 2: Make sure that your period is not 1939-40. There is no 1939 data.
Note 3: Even when generating normals, make sure not to pick a date in the future.

Values or Departure strip (1=Values, 2=Departure): [1 ▾]
Show Values or Departure strip (1=Yes, 2=No) [2 ▾]

Begin Climo [1991]   End Climo [2020]

Central Longitude (Arctic Only) [-150]
(Used for Map Type options 2 and 3 above)

ENSO Section Only ONI Min [-5.0]   ONI Max [5.0]   [Use to select from a range of average ONI val; or enter list of years manually below.]

OR   List of years [   ]
Map Subtitle (used when a list of years is entered) [20 chars or less]
Above/Below (1=Above/2=Below): [1 ▾] [100.0] From Climo.   Use Detrended Climatology (ONI or list of years) ☑

[Note 1: Only Used if Map Type is 9. Takes 6 mins for new query. Min of 4+ years and separated by commas has priority. For DJF use end year.]
[Note 2: For the count of years above the trendline, units are % avg for snow and precip and clouds. Specify units below for temp, dew pt, and wind.]

Units -> Metric or Imperial (1 = Metric, 2 = Imperial): [1 ▾]

Temp/Wind Departure/Temp Trend Interval [1.0]   (Makes 11 categories of Map Interval size.)

Dark Mode : ☐

Raw data obtained from Copernicus ECMWF Server. Analysis may not be accurate. **Use at your own risk!**

[Generate] (to reset form, select map area 0 and press button)

Contiguous U.S. Oct 2023-Apr 2024 Snowfall Categories

Average snowfall must be >1" for inclusion
Snow is tough because, in theory, you want snow in all 30 years for inclusion
Time series of values in Imperial units

Snowfall Classification for Oct-Apr 2023-24

Source: ERA5 Reanalysis

Map by: Brian Brettschneider

Much Below | Below | Near Normal | Above | Much Above

Compared to 1991-2020 Base Period

Select Map Area (1-10) 3 ⌄

1 = Global (time: 0:30 to 1:20)
2 = U.S./Canada (time: 0:30 to 1:40)
3 = Contiguous U.S. (time: 0:30 to 1:50)
4 = Alaska (time: 0:30 to 1:30) ☐ Indigenous names
5 = Alaska and NW Canada (time: 0:30 to 1:15)
6 = Polar (time: 0:30 to 1:30) (55 to 90) North ☑
7 = Europe (time: 0:30 to 1:20)
8 = Pacific Northwest (time: 0:30 to 1:35)
9 = U.S. Pacific Islands (time: 0:30 to 1:25)
10 = Country, State, Province, or Box (all Plate Carree)
[Global]
Countries (e.g., Country New Zealand)
States (e.g., State New York)
Canada provinces/territories (e.g., Canada Manitoba)
Box, N. Lat, S. Lat, W. Lon, E. Lon (Example: Box,45,25,-120,-50)

Select Map Type (1-9) 3 ⌄

1 = Ranks (since 1940)
2 = Departure From Normal (not clouds/wind)
3 = Below, Near, Above Normal (slower)
4 = Target Year Values (not wind)
5 = Normal Values (not wind)
6 = 50 or 75-Year trend (8-10 mins for new run)
7 = 50-Year ENSO Season Correlation (6-10 mins for new run)
8 = SPI (precip auto selected; 8-mins for new run)
9 = Composite ENSO or List of Years (6-mins for new run)

Ranks / trend start year 1940 ⌄

Note: For periods that wrap around New Year,
the start year should by the year at the start
of the period. For 1974-75 to 2023-24, (50 years),
enter 1974 here (end year should be most current year).

Choose Map Theme (1-8): 3 ⌄

Available themes: 1 = t2m, 2 = precip, 3 = snow, 4 = sst,
5 = dewpt, 6 = clouds, 7 = wind, 8 = seaice

Map Elements (Check top row for most N. American maps)
Lower 48 States ☑ U.S. Counties ☑ Canada Provinces ☑
Major Rivers ☐ U.S. Interstates ☐ Gridlines ☐
NWS WFOs ☐ NPS Units ☐ Climate Divs ☐
Major World Cities ☐ World Roads (adds 1:00) ☐

Last month to start evaluation (e.g., 2 for Feb) 4 ⌄

Number of months (up to 12) to evaluate (e.g., 3 for Dec-Feb) 7 ⌄

Year of last month for assessment: 2024

Note 1: Do not select a date in the future!
Note 2: Make sure that your period is not 1939-40. There is no 1939 data.
Note 3: Even when generating normals, make sure not to pick a date in the future.

Values or Departure strip (1=Values, 2=Departure): 1 ⌄
Show Values or Departure strip (1=Yes, 2=No): 1 ⌄

Begin Climo 1991   **End Climo** 2020

Central Longitude (Arctic Only) -150
(Used for Map Type options 2 and 3 above)

ENSO Section Only ONI Min -5.0   ONI Max 5.0   [Use to select from a range of average ONI val; or enter list of years manually below.]

OR List of years [   ]
Map Subtitle (used when a list of years is entered) [20 chars or less]
Above/Below (1=Above/2=Below): 1 ⌄ 100.0 From Climo.   Use Detrended Climatology (ONI or list of years) ☑

[Note 1: Only Used if Map Type is 9. Takes 6 mins for new query. Min of 4+ years and separated by commas has priority. For DJF use end year.]
[Note 2: For the count of years above the trendline, units are % avg for snow and precip and clouds. Specify units below for temp, dew pt, and wind.]

Units -> Metric or Imperial (1 = Metric, 2 = Imperial): 2 ⌄

Temp/Wind Departure/Temp Trend Interval 1.0 (Makes 11 categories of Map Interval size.)
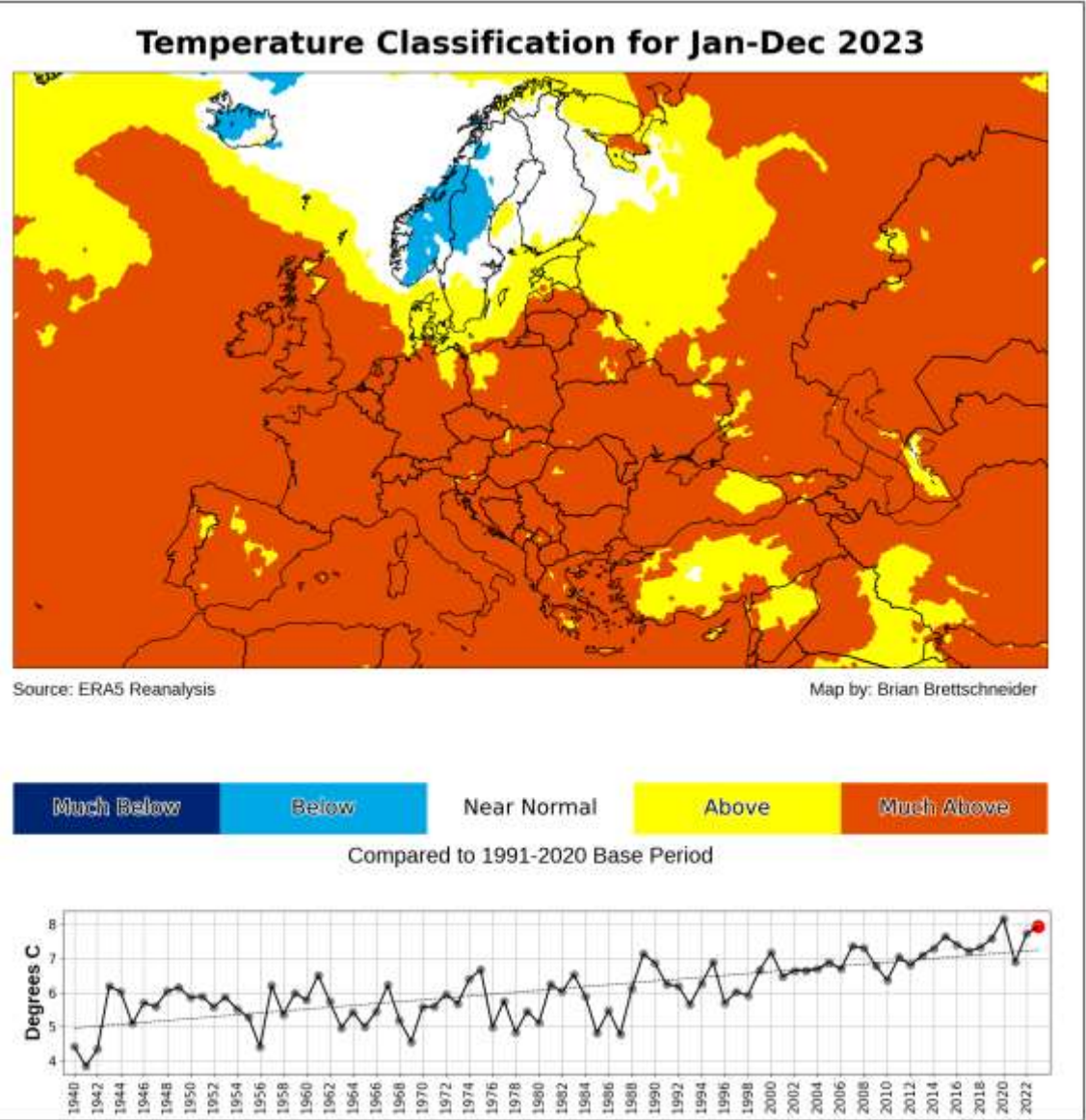
Dark Mode: ☐

Raw data obtained from Copernicus ECMWF Server. Analysis may not be accurate. **Use at your own risk!**

[Generate] (to reset form, select map area 0 and press button)

Europe Jan-Dec 2023 Temperature Categories

Uses 1991-2020 Baseline
Metric values time series strip on bottom
No other map elements added

Temperature Classification for Jan-Dec 2023

Source: ERA5 Reanalysis   Map by: Brian Brettschneider

Much Below | Below | Near Normal | Above | Much Above

Compared to 1991-2020 Base Period

Select Map Area (1-10): 7 ▾

1 = Global (time: 0:30 to 1:20)
2 = U.S./Canada (time: 0:30 to 1:40)
3 = Contiguous U.S. (time: 0:30 to 1:50)
4 = Alaska (time: 0:30 to 1:30) ☐ Indigenous names
5 = Alaska and NW Canada (time: 0:30 to 1:15)
6 = Polar (time: 0:30 to 1:30) (60 to 90) North ☑
7 = Europe (time: 0:30 to 1:20)
8 = Pacific Northwest (time: 0:30 to 1:35)
9 = U.S. Pacific Islands (time: 0:30 to 1:25)
10 = Country, State, Province, or Box (all Plate Carree)
Country India
Countries (e.g., Country New Zealand)
States (e.g., State New York)
Canada provinces/territories (e.g., Canada Manitoba)
Box, N. Lat, S. Lat, W. Lon, E. Lon (Example: Box,45,25,-120,-50)

Select Map Type (1-9): 3 ▾

1 = Ranks (since 1940)
2 = Departure From Normal (not clouds/wind)
3 = Below, Near, Above Normal (slower)
4 = Target Year Values (not wind)
5 = Normal Values (not wind)
6 = 50 or 75-Year trend (8-10 mins for new run)
7 = 50-Year ENSO Season Correlation (6-10 mins for new run)
8 = SPI (precip auto selected; 8-mins for new run)
9 = Composite ENSO or List of Years (6-mins for new run)

Ranks / trend start year 1940 ▾

Note: For periods that wrap around New Year,
the start year should by the year at the start
of the period. For 1974-75 to 2023-24, (50 years),
enter 1974 here (end year should be most current year).

Choose Map Theme (1-8): 1 ▾

Available themes: 1 = t2m, 2 = precip, 3 = snow, 4 = sst ,
5 = dewpt, 6 = clouds, 7 = wind, 8 = seaice

Map Elements (Check top row for most N. American maps)
Lower 48 States ☐ U.S. Counties ☐ Canada Provinces ☐
Major Rivers ☐ U.S. Interstates ☐ Gridlines ☐
NWS WFOs ☐ NPS Units ☐ Climate Divs ☐
Major World Cities ☐ World Roads (adds 1:00) ☐

Last month to start evaluation (e.g., 2 for Feb): 12 ▾

Number of months (up to 12) to evaluate (e.g., 3 for Dec-Feb): 12 ▾

Year of last month for assessment: 2023

Note 1: Do not select a date in the future!
Note 2: Make sure that your period is not 1939-40. There is no 1939 data.
Note 3: Even when generating normals, make sure not to pick a date in the future.

Values or Departure strip (1=Values, 2=Departure): 1 ▾
Show Values or Departure strip (1=Yes, 2=No): 1 ▾

Begin Climo 1991   End Climo 2020

Central Longitude (Arctic Only) 0
(Used for Map Type options 2 and 3 above)

ENSO Section Only ONI Min -5.0   ONI Max 5.0   [Use to select from a range of average ONI val; or enter list of years manually below.]

OR List of years
Map Subtitle (used when a list of years is entered) 20 chars or less
Above/Below (1=Above/2=Below): 1 ▾ 100.0 From Climo.   Use Detrended Climatology (ONI or list of years) ☑

[Note 1: Only Used if Map Type is 9. Takes 6 mins for new query. Min of 4+ years and separated by commas has priority. For DJF use end year.]
[Note 2: For the count of years above the trendline, units are % avg for snow and precip and clouds. Specify units below for temp, dew pt, and wind.]

Units -> Metric or Imperial (1 = Metric, 2 = Imperial): 1 ▾

Temp/Wind Departure/Temp Trend Interval 1.0   (Makes 11 categories of Map Interval size.)

Dark Mode : ☐

Data obtained from ECMWF Copernicus CDS. Analysis may not be accurate. **Use at your own risk!**

Generate   (to reset form, select map area 0 and press button)