



Business Confidential

NL WRMD

2026 Hurricane Season Forecasting Outlook

2026-06-02

CA005514.1288





Document distribution

NL Weather Resource Management Division

2026 Hurricane Forecasting Outlook

2026-06-02

CA005514.1288

Prepared for

Water Resources Management Division Department of Environment and Climate Change

Environment and Climate Change
P.O. Box 8700 St. John's, NL A1B 4J6

Prepared by

WSP Canada, Inc.
36 Pippy Place
St. John's, NL A1B 3X4 Canada
T 1 709-739-7775

Quality control	Name	Date
Prepared by:	Nicholas Camizzi	5/25/2026
Reviewed by:	Ben Hargrave	5/25/2026
Approved by:	Nikolay Damyanov	6/2/2026

This report was prepared exclusively for Water Resources Management Division Department of Environment and Climate Change by WSP Canada Inc. The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in WSP's services and based on: i) information available at the time of preparation, ii) data supplied by outside sources and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by Water Resources Management Division Department of Environment and Climate Change only, subject to the terms and conditions of its contract with WSP. Any other use of, or reliance on, this report by any third party is at that party's sole risk.



Table of contents

Abbreviations and glossary	7
Executive Summary	9
1. Atlantic Hurricane Season Outlook 2026	10
2. Historical Newfoundland and Labrador Hurricane Seasons	22
3. Analog Years and Historical Tracks	27
4. Newfoundland and Labrador Hurricane Season Outlook 2026	34
5. Bibliography	37

Table 1	Atlantic Tropical Storm and Hurricane Forecasts	11
Table 2	2006 Tropical Storm, hurricane, and remnant impacts for select municipalities	29
Table 3	2009 Tropical Storm, hurricane, and remnant impacts for select municipalities	30
Table 4	2023 Tropical Storm, hurricane, and remnant impacts for select municipalities	30

Figure 1	ENSO Regions	12
Figure 2	Official CPC ENSO Probability Forecast (May) (Climate Prediction Center Internet Team, 2026)	13
Figure 3	NOAA CPC ENSO Strength Probabilities (May) (Climate Prediction Center Internet Team, 2026)	14
Figure 4	Smoothed AMO Index [1870-2021] (Trenberth, et al., 2025)	15
Figure 5	Global SST Anomaly (°C), May 22 nd (Boreham, 2019-2026)	16
Figure 6	SST Anomaly Difference from Global Mean SSTA (°C), May 24 th (Cowan, 2026)	16
Figure 7	C3S Multi-system Seasonal Forecast Jul-Aug-Sep Precipitation Anomaly (The Copernicus Climate Change Service (CS3), 2026)	18
Figure 8	ECMWF Seasonal Forecast tropical storm frequency Jun, Jul, Aug, Sep, Oct, and Nov 2026 (ECMWF , 2026)	19



Figure 9	Same as Figure 8 except forecast hurricane or typhoon frequency (ECMWF , 2026)	20
Figure 10	Same as Figure 8 and 9 except forecast ACE (ECMWF , 2026)	21
Figure 11	Tropical cyclone and post-tropical remnants by year for NL (1901-2025)	23
Figure 12	Same as Figure 8 except broken down by month	24
Figure 13	Rainfall totals in eastern Newfoundland from Earl (2022), 1 inch = 25.4 mm	25
Figure 14	Newfoundland tropical cyclone probability by given position using 1886-2020 Best-track	26
Figure 15	Upper-air (500 hPa) Geopotential Height (m) composite anomaly for June through November for the analog years	28
Figure 16	Same as Figure 15 except September only	29
Figure 17	North Atlantic Hurricane Tracking Chart (2023) (NHC, 2026)	31
Figure 18	Same as Figure 14 except 2015 (NHC, 2026)	31
Figure 19	Same as Figure 14 except 2009 (NHC, 2026)	32
Figure 20	Same as Figure 14 except 2006 (NHC, 2026)	32
Figure 21	Same as Figure 14 except 1997 (NHC, 2026)	33
Figure 22	Newfoundland Hurricane Season Risk Map	35
Figure 23	Same as Figure 18 except Labrador	36



Abbreviations and glossary

Abbreviations

Abbreviation	Description
ACE	Accumulated Cyclone Energy
AMO	Atlantic Multidecadal Oscillation
C3S	Copernicus Climate Change Service
CPC	Climate Prediction Centre
CSU	Colorado State University
ECCC	Environment and Climate Change Canada
ENSO	El Nino – Southern Oscillation
IBTrACS	International Best Track Archive for Climate Stewardship
MDR	Main Development Region
NOAA	National Oceanic and Atmospheric Administration
NHC	National Hurricane Centre
SST	Sea Surface Temperature
TSR	Tropical Storm Risk

Glossary of terms

Term	Explanation
ACE	An index that sums the square of each storm's maximum wind speeds at 6-hour intervals, then divides by 10,000 to better assess destructive potential (Yan, et al., 2014).
AMO	A multidecadal index that partially explains the periodicity of tropical cyclone activity in the North Atlantic Ocean. Positive values are associated with elevated activity while negative values are associated with suppressed activity (Yan, et al., 2014).
El Niño	A significant increase in SST over the eastern and central equatorial Pacific that occurs at irregular intervals, generally ranging from between two and seven years (American Meteorological Association, 2026).

Term	Explanation
ENSO	A more holistic term for the combined ocean and atmospheric system associated with El Niño, La Niña, and neutral events (American Meteorological Association, 2026).
Hurricane	A subset of tropical cyclones with maximum sustained wind speeds of 64 knots (119 km/h) or greater.
La Niña	Same as El Niño except for a significant decrease in SST (American Meteorological Association, 2026).
Major Hurricane	A subset of tropical cyclones with maximum sustained winds speeds of 96 knots (178 km/h) or greater. This includes category 3, 4, and 5 hurricanes.
Atlantic MDR	A region generally from 10 °N to 20 °N and 20 °W and 85 °W in the North Atlantic Ocean. This is the area where most Atlantic tropical cyclones develop.
Niño-3.4	A region from 5 °N to 5 °S and 170 °W to 120 °W in the Pacific Ocean. This region is most commonly used to measure the SST anomaly for El Niño, La Niña, and neutral phases.
Post-tropical Cyclone	A storm that no longer possesses sufficient tropical characteristics to be considered a tropical cyclone but can continue to produce heavy rain and high winds.
Tropical Cyclone	The generic term for any tropical system on the globe with maximum sustained wind speeds of 34 knots (63 km/h) or greater. Generally, these storms form over SSTs above 26 °C in areas of low wind shear and intensify due to the combination of heat from the ocean and condensation of water vapour.
Tropical Storm	A subset of tropical cyclones with maximum sustained winds of 34 knots (63 km/h) or greater, and 63 knots (118 km/h) or less.
Wind Shear	The difference in vector winds between the upper levels of the atmosphere and the lower levels of the atmosphere. Above-normal wind shear suppresses hurricane activity, while below-normal wind shear enhances it.



Executive Summary

WSP anticipates a below-normal hurricane season for Newfoundland and Labrador due to the development of El Niño this summer.

1. Atlantic Hurricane Season Outlook 2026

WSP anticipates a below-normal hurricane season for Newfoundland and Labrador due to the development of El Niño this summer. Confidence is moderate to high this year since El Niño is already developing, and the El Niño is likely to attain moderate or strong intensity during the peak of the hurricane season. Other factors, like agency forecasts, analog years, seasonal models and the Atlantic Global Mean SST difference, are also supportive of below-normal activity.

The Atlantic Hurricane Season runs from June 1st to November 30th, although storms can and do form outside of the designated season. The peak of the hurricane season for the Atlantic basin and for Newfoundland and Labrador is early to mid-September. The hurricane season can be a trying time for many people in the Caribbean, Central America, the US, and Atlantic Canada, with major costs to life and property at stake. While the most significant impacts of the hurricane season tend to be felt in the tropics and subtropics, Atlantic Canada is no stranger to significant impacts. We've seen difficulties with Fiona (2022), Dorian (2019), Larry (2021), and Igor (2010).

While not the main subject of this outlook, IPCC Chapter 11 Weather and Climate Extreme Events in a Changing Climate (Seneviratne, 2021), highlights robust evidence that the magnitude and intensity of extreme precipitation has very likely increased since the 1950s in North America. 72.9% of eastern North America stations show an increase, with 9.3% of stations showing a significant increase. This is likely to increase under all warming scenarios, with greater increases for the warmest scenarios. There is high confidence in average and maximum rain rates associated with tropical cyclones, extratropical cyclones, and atmospheric rivers increasing in a warming world. Both short-term and long-term mitigation strategies will be needed to both anticipate and reduce flooding risk in the coming years for the province.

Numerous sources of weather data are used in this hurricane outlook, with the major sources based on the prediction of ENSO, SSTs, model predictions, and weather patterns. Models have some long-range skill in predicting SSTs, vertical wind shear, moisture availability, stability, and weather patterns in the coming months, especially in cases when the ENSO signal is robust. The seasonal weather pattern prediction provides an overview of the entire season, but it cannot fully convey the daily and weekly fluctuations in the pattern. The short-term variability in the weather pattern plays a major role in the development, intensification, and tracking of tropical storms and hurricanes. Furthermore, the intensity and duration of the predicted tropical storms and hurricanes can occur under different combinations of climatic signals, which amplifies the uncertainty of such predictions.



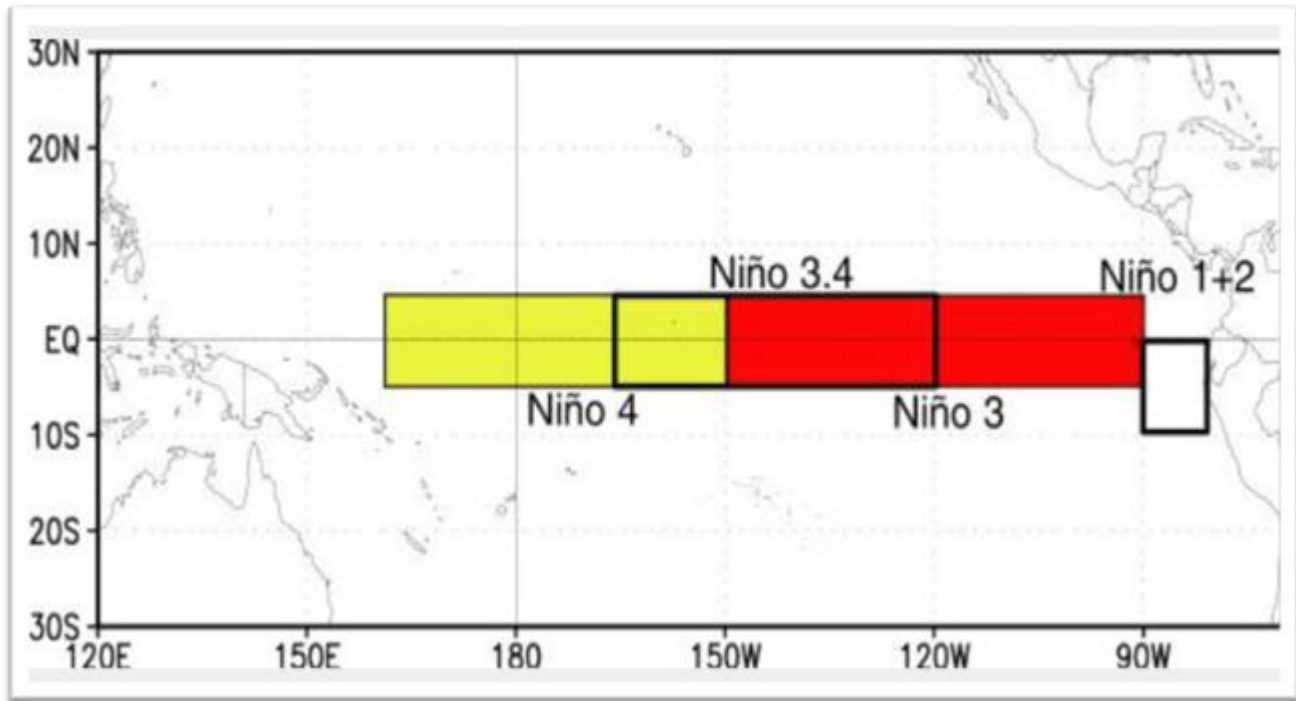
Several agencies issue an Atlantic hurricane season outlook, including NOAA, CSU (Klotzbach, et al., 2026), and TSR (Lea, 2026) (Table 1). NOAA’s 2026 Atlantic Hurricane Seasonal Outlook predicts a below-normal season (NOAA, 2026). Both CSU and TSR issue forecasts for ACE, which biases toward long-lasting intense hurricanes rather than weak tropical storms, because long-lasting intense hurricanes are more likely to cause destruction. CSU is predicting a seasonal ACE of 90, which is below the 1991-2020 average of 123. Meanwhile TSR is predicting a seasonal ACE of 66, which is well below the 1991-2020 average. Table 1 below summarizes the predictions from each source.

Table 1 Atlantic Tropical Storm and Hurricane Forecasts

	NOAA	CSU	TSR
NAMED STORMS	8-14	13	12
HURRICANES	3-6	6	5
MAJOR HURRICANES	1-3	2	1

ENSO is the leading predictor for seasonal forecasts as it is reasonably forecastable on a time scale of months and has a large effect on the global atmospheric circulation. The phase of the ENSO is typically defined by the persistence of warm SST anomalies ($>0.5\text{ }^{\circ}\text{C}$) for five (5) consecutive 3-month periods in the Niño 3.4 region (Figure 1), while the opposite is true for La Niña. The neutral phase is defined when the Niño 3.4 region is within $\pm 0.5\text{ }^{\circ}\text{C}$ for 5 consecutive 3-month periods.

Figure 1 ENSO Regions



The La Niña phase is climatologically associated with weaker vertical wind shear, weaker trade winds, and increased atmospheric instability across the Atlantic basin, which in turn helps the overall organizational structure of any tropical storm. Meanwhile, the El Niño phase suppresses storm organization due to stronger wind shear, stronger trade winds, and greater atmospheric stability across the Atlantic basin. It is also worth noting that both ENSO phases have opposite effects on the east Pacific and Atlantic basins.

Figure 2 shows the NOAA probabilistic ENSO forecast based on the Niño-3.4 SST anomaly. El Niño conditions are highly favored (98%) during the peak hurricane season (Aug-Sep-Oct), with an 80% chance of a moderate, strong, or very strong El Niño during that time (Figure 3). Given such a robust ENSO signal, we can be more confident that generally detrimental conditions for tropical storms and hurricanes will be present in the Atlantic Basin during the peak hurricane season.



Figure 2 Official CPC ENSO Probability Forecast (May) (Climate Prediction Center Internet Team, 2026)

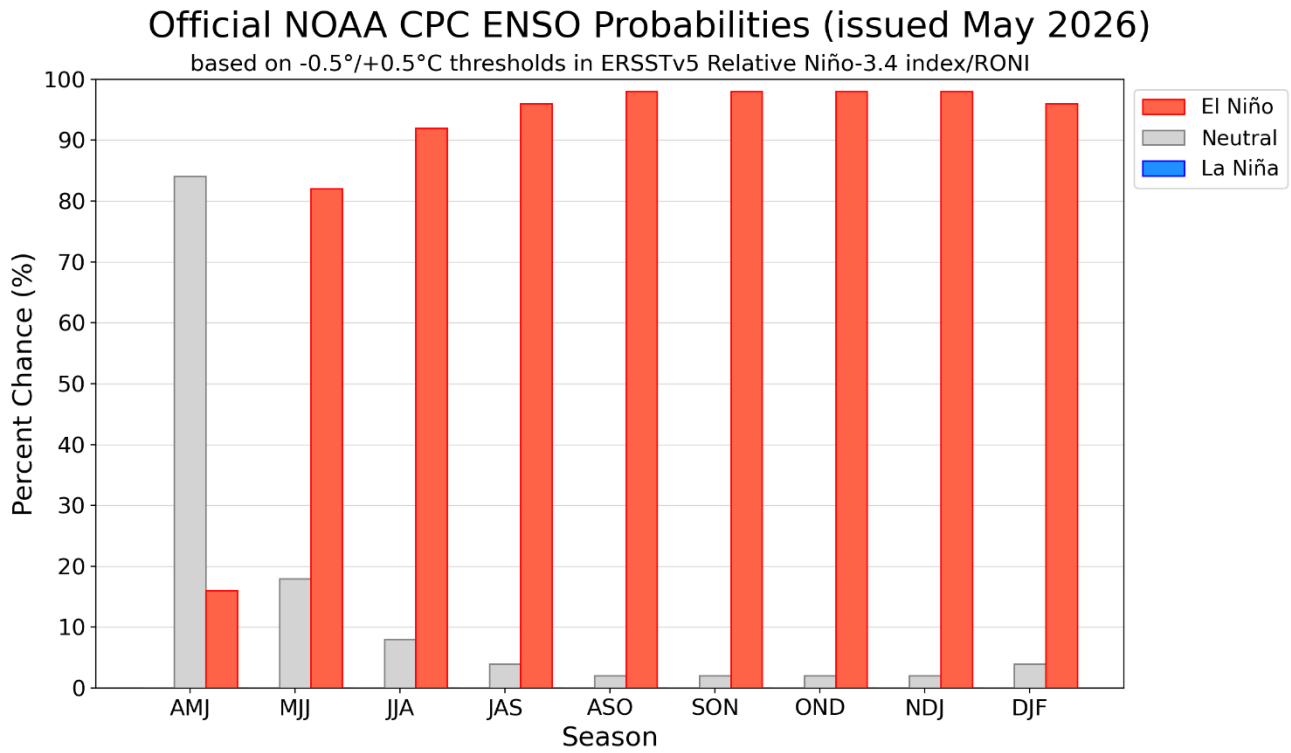
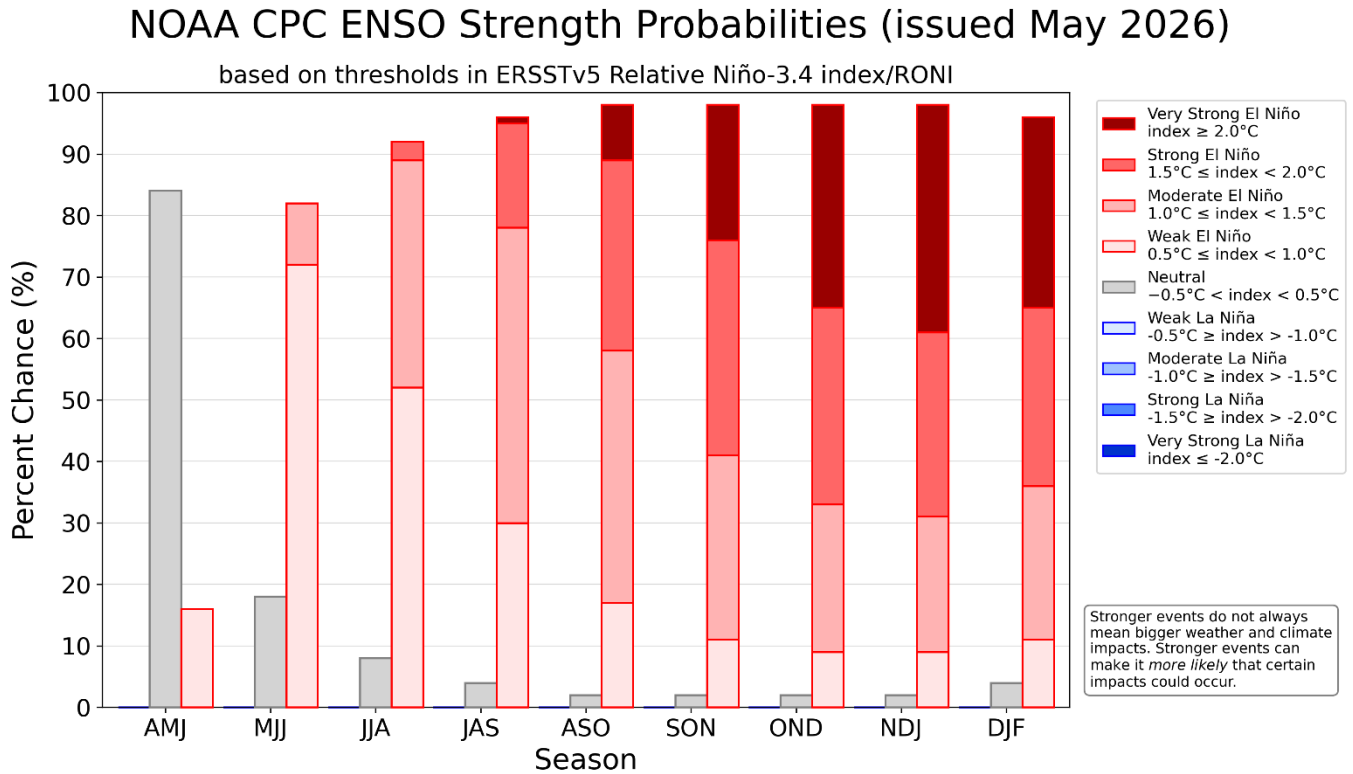




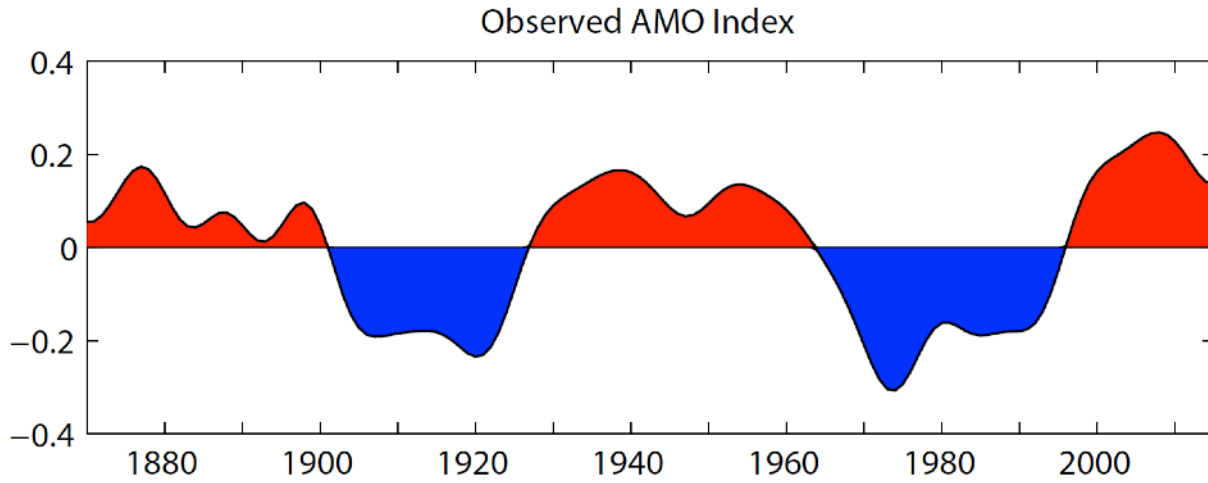
Figure 3 NOAA CPC ENSO Strength Probabilities (May) (Climate Prediction Center Internet Team, 2026)



Hurricane season predictions consider the various and complex interactions of variables such as ENSO, AMO, mid-level atmospheric moisture, northwest Atlantic sea-level pressure, and upper air patterns. The current positive phase of the AMO (Figure 4) which we've been in since about 1995 is conducive to lower surface pressure, moist atmospheric mid-levels over the tropical Atlantic, and consequently, more hurricane activity. While we are likely still in a long-term averaged positive AMO, the overall Atlantic SST configuration and the data from Colorado State AMO index (Gray, 2008) suggest that the Atlantic AMO is currently negative, and more hostile to activity than other recent years.



Figure 4 Smoothed AMO Index [1870-2021] (Trenberth, et al., 2025)



The latest SST observation (Figure 5) shows significantly-above-normal SSTs in the central and eastern equatorial Pacific and above normal SSTs in the Gulf of Mexico and southwest North Atlantic (Figure 5). SST anomalies in the Niño-3.4 Region have been above the 0.5 °C threshold for the past month. Parts of the MDR over the central and eastern Atlantic are near to slightly below normal.

Figure 5 Global SST Anomaly (°C), May 22nd (Boreham, 2019-2026)

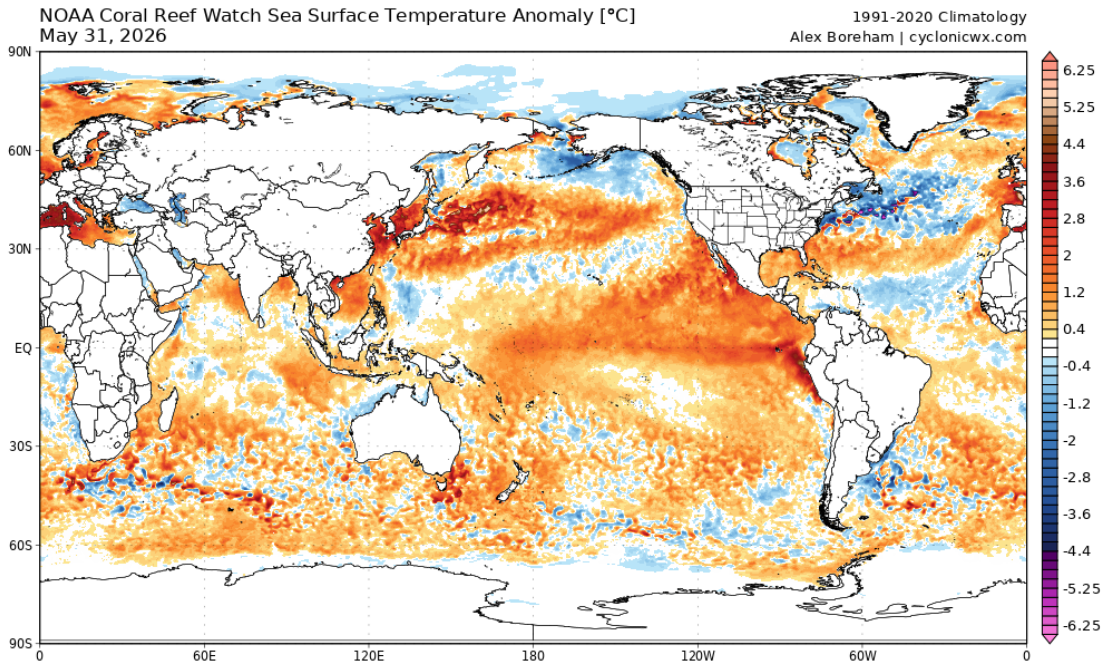
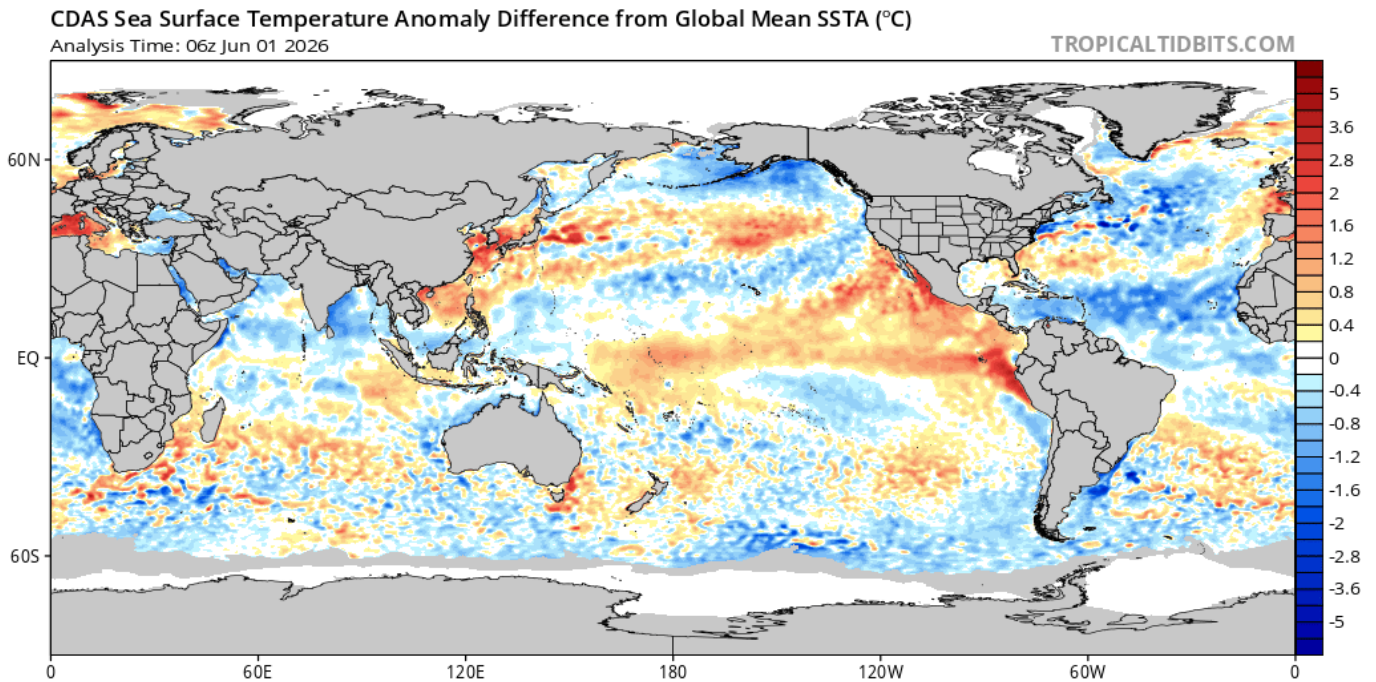


Figure 6 SST Anomaly Difference from Global Mean SSTA (°C), May 24th (Cowan, 2026)



The WSP Seasonal Outlook Team is anticipating a below-normal Atlantic Hurricane Season. This is due to both the confidence in El Niño conditions and the confidence that the coming El Niño will be significant. This is expected to be the dominant factor this season since Atlantic Hurricane activity on a year-over-year basis is highly modulated by wind shear. On average, the SSTs are slightly above normal



in the MDR, but they are not as anomalously high as seen in past recent years, and they are cooler than other areas in the Pacific and eastern Indian Ocean (Figure 6). This tends to have a suppressive effect on tropical cyclone activity. The seasonal models strongly indicate below-normal precipitation across the MDR, the Caribbean, the Gulf of Mexico, and the southwest Atlantic (Figure 7), with above-normal precipitation in the central and eastern Pacific Ocean, which is generally associated with below-normal hurricane activity in the North Atlantic. The ECMWF Seasonal Forecast (ECMWF , 2026) indicates a below-normal season in terms of all tropical storms (Figure 8), hurricanes (Figure 9), and ACE (Figure 10). The predictions of both the total number of hurricanes (5.7) and the normalized ACE (0.8) are statistically significant at 5%.

Figure 7 C3S Multi-system Seasonal Forecast Jul-Aug-Sep Precipitation Anomaly (The Copernicus Climate Change Service (CS3), 2026)

C3S multi-system seasonal forecast ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECCC/BOM
Mean precipitation anomaly JAS 2026
Nominal forecast start: 01/05/26
Variance-standardized mean

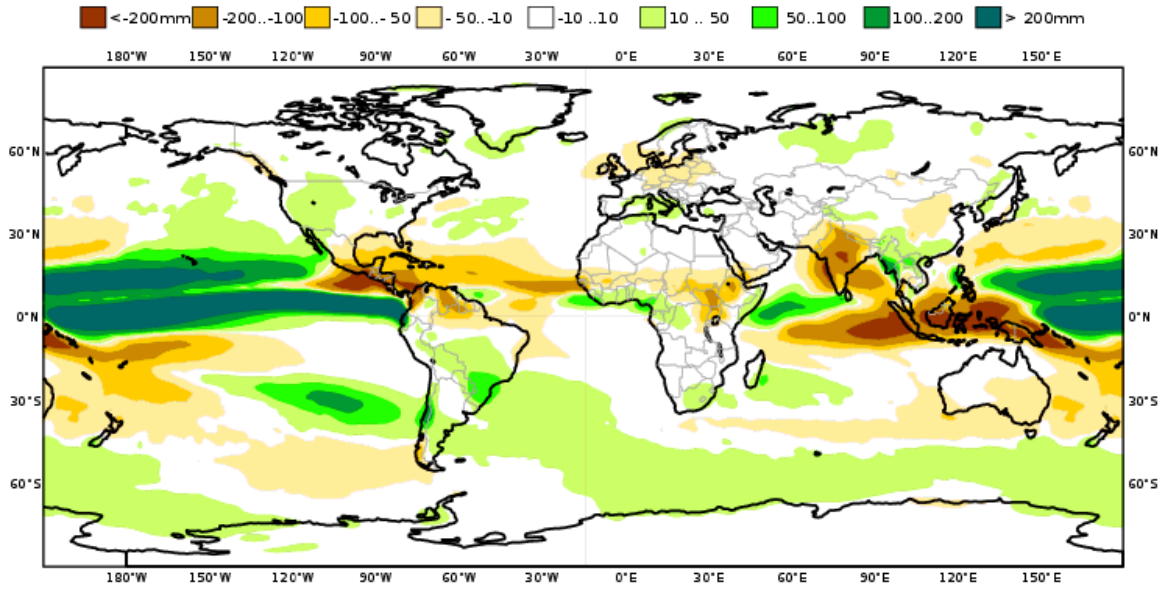




Figure 8 ECMWF Seasonal Forecast tropical storm frequency Jun, Jul, Aug, Sep, Oct, and Nov 2026 (ECMWF , 2026)

ECMWF Seasonal Forecast
Tropical Storm Frequency
Forecast start reference is 01/05/2026
Ensemble size = 51, climate size = 825

SEAS5
JJASON 2026
Climate (initial dates) = 1993-2025

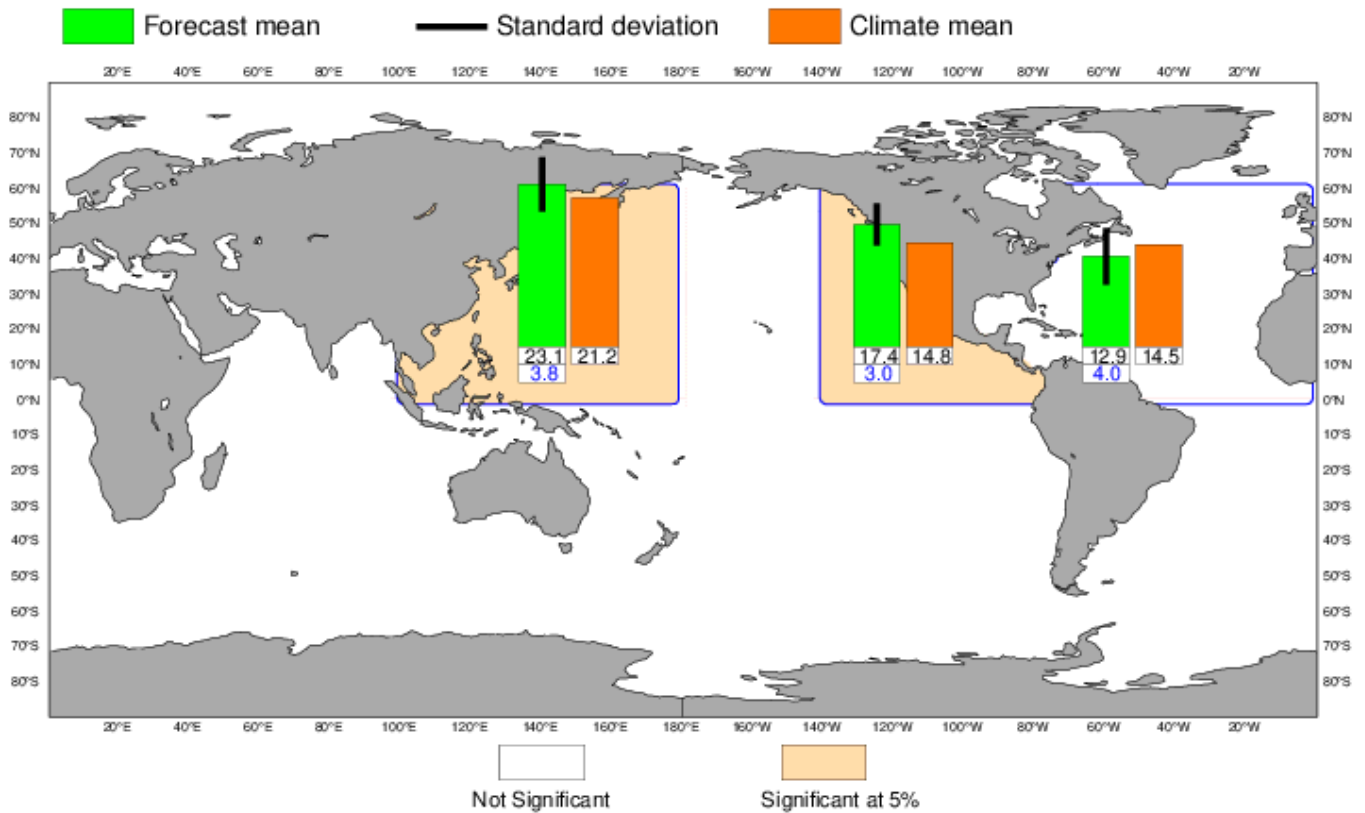




Figure 9 Same as Figure 8 except forecast hurricane or typhoon frequency (ECMWF , 2026)

ECMWF Seasonal Forecast
Hurricane or typhoon Frequency
Forecast start reference is 01/05/2026
Ensemble size = 51, climate size = 825

SEAS5
JJASON 2026
Climate (initial dates) = 1993-2025

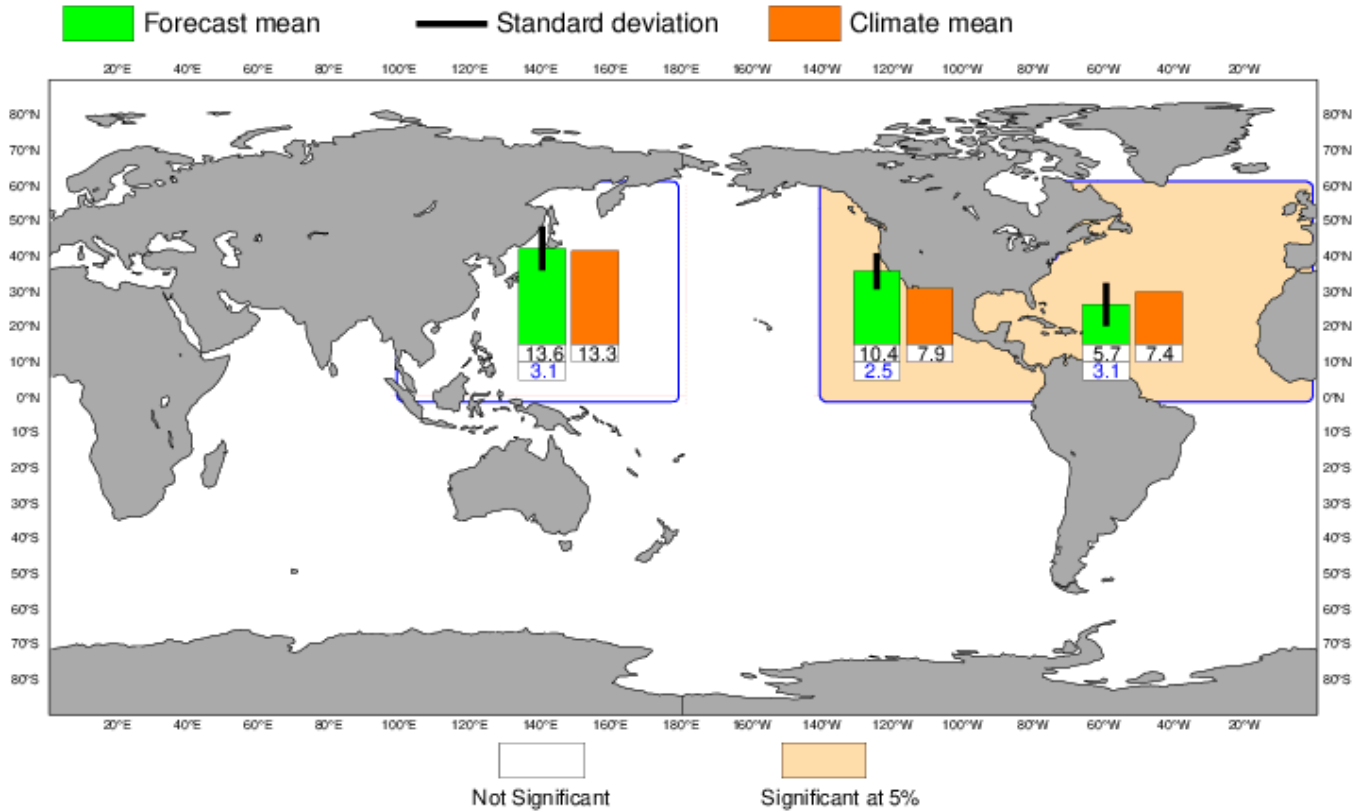
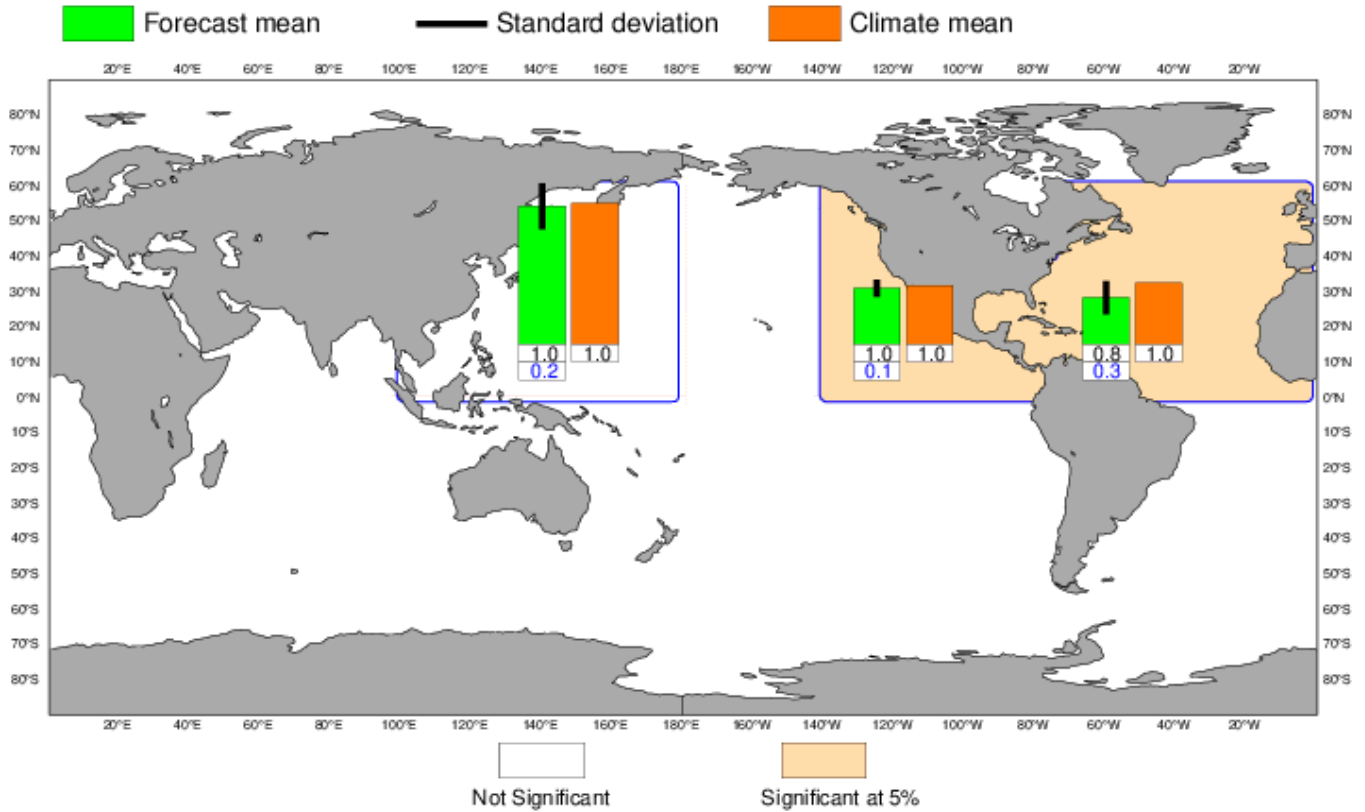




Figure 10 Same as Figure 8 and 9 except forecast ACE (ECMWF , 2026)

ECMWF Seasonal Forecast
Accumulated Cyclone Energy
Forecast start reference is 01/05/2026
Ensemble size = 51, climate size = 825

SEAS5
JJASON 2026
Climate (initial dates) = 1993-2025



2. Historical Newfoundland and Labrador Hurricane Seasons

The archive records from the NHC HURDAT2 and NOAA's IBTrACS data sets show Newfoundland being impacted by more than double the tropical storms, hurricanes, and post-tropical remnants than Labrador, as seen in Figure 11 and Figure 12. This year's report continues to use a further expanded historical data set that better accounts for post-tropical remnants and storms which didn't make landfall but tracked close enough to the province to make an impact. These storms do not have to retain much of their prior strength to bring high levels of atmospheric moisture, rainfall, and likewise flooding to our region.

Even so, this larger database does not cover all floods directly or indirectly related to tropical systems. Two floods of record, one from Post-Tropical Earl (2022) in eastern Newfoundland (Figure 13) and another from the moisture from Hurricane Matthew (2016) in western and central Newfoundland are not included in this database. Earl tracked too far from Newfoundland (270 km SSE of Cape Race). The same records reveal the month of September as the peak month for activity in the province, followed by October, and then August (Figure 12).

Most tropical storms, hurricanes, and post-tropical storms that impact Newfoundland track from north of the Antilles to near and west of Bermuda, and approach from the south or southwest (Figure 14). Since many storms frequently track in this area of the Atlantic and recurve without impact, it's important for us to monitor track models and the general weather conditions to see if the pattern is conducive for an impact to the province.

Figure 11 Tropical cyclone and post-tropical remnants by year for NL (1901-2025)

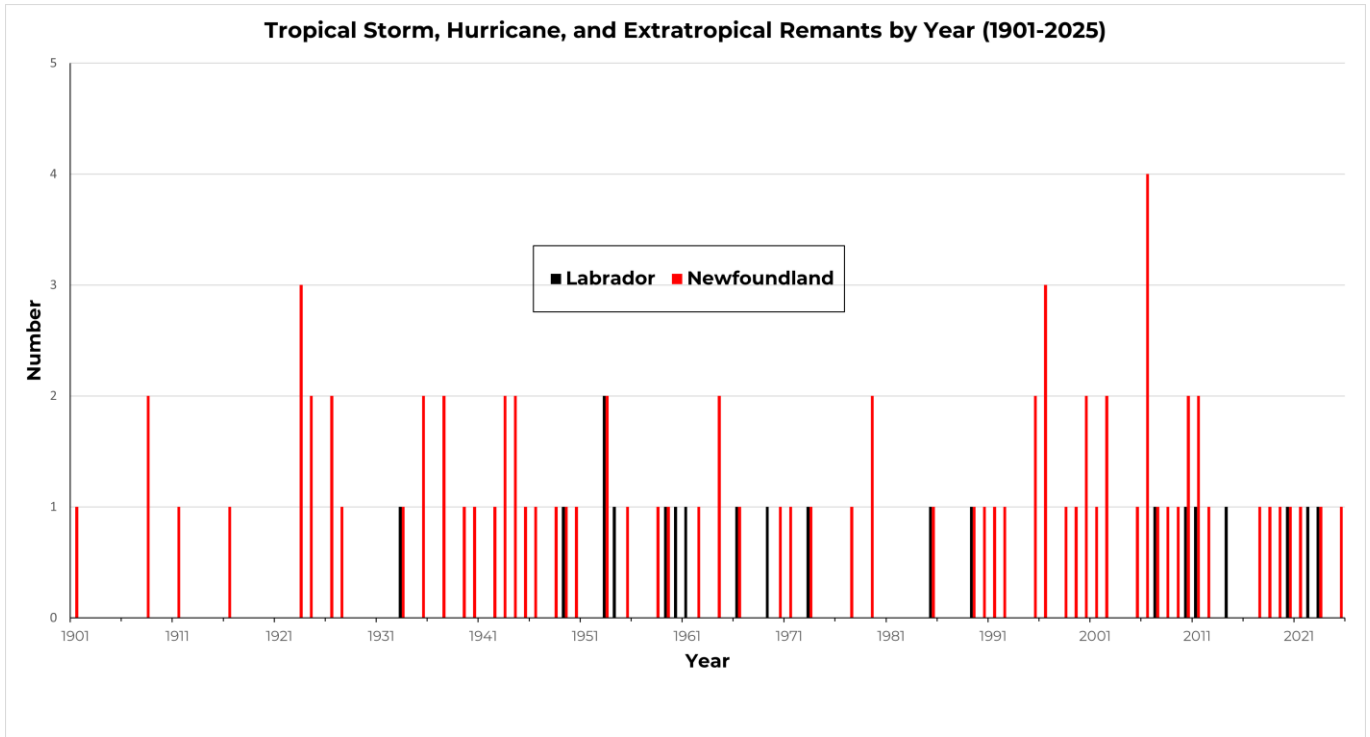


Figure 12 Same as Figure 8 except broken down by month

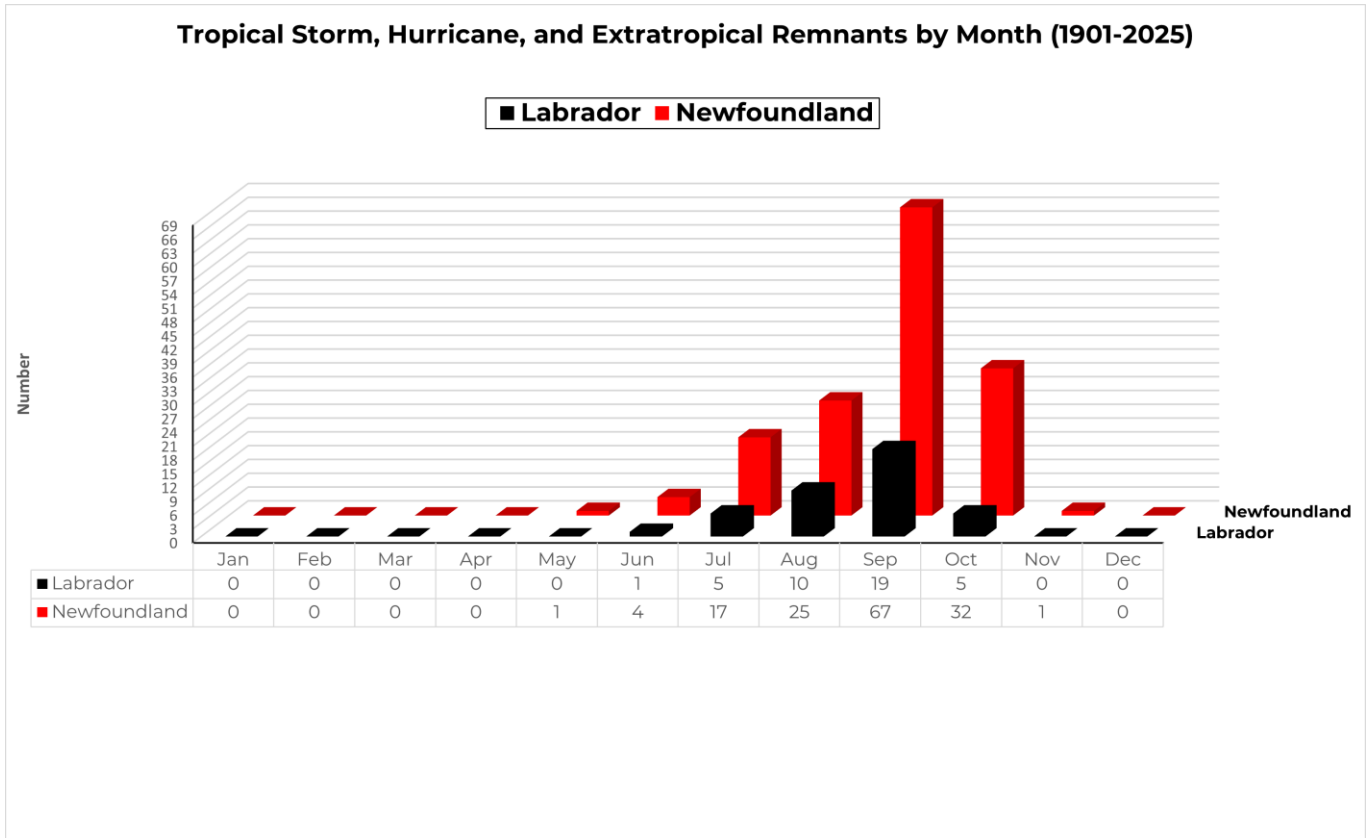


Figure 13 Rainfall totals in eastern Newfoundland from Earl (2022), 1 inch = 25.4 mm

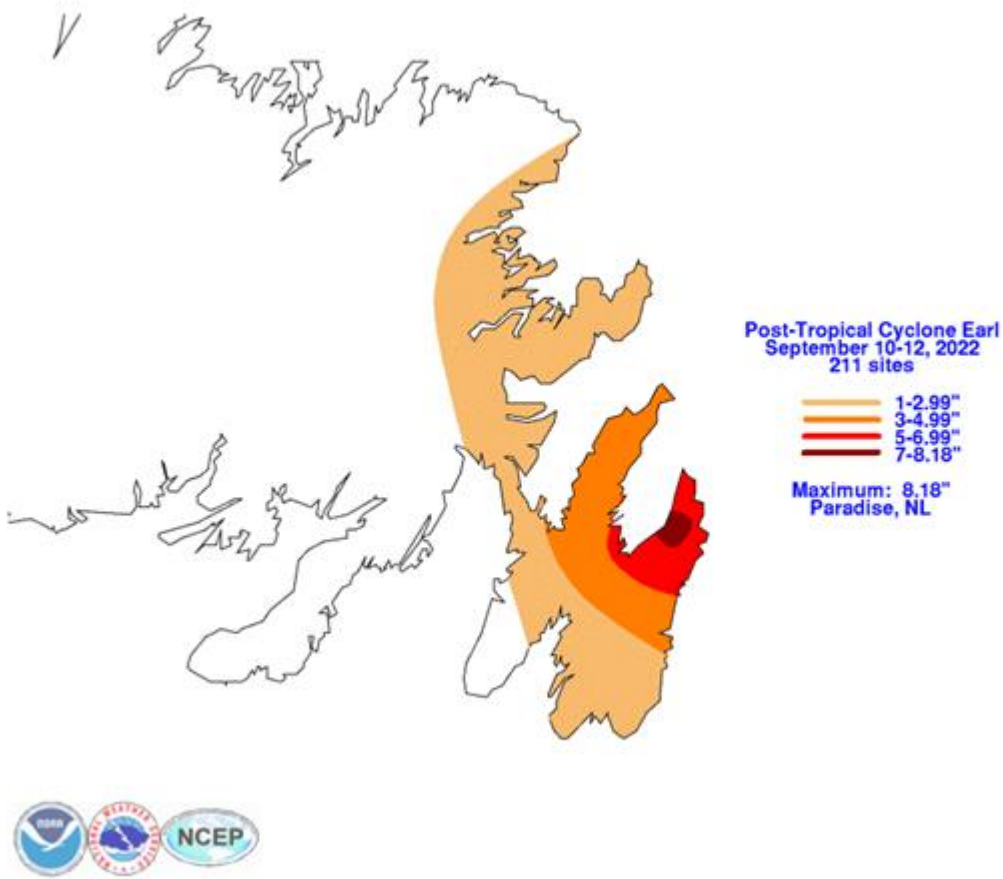
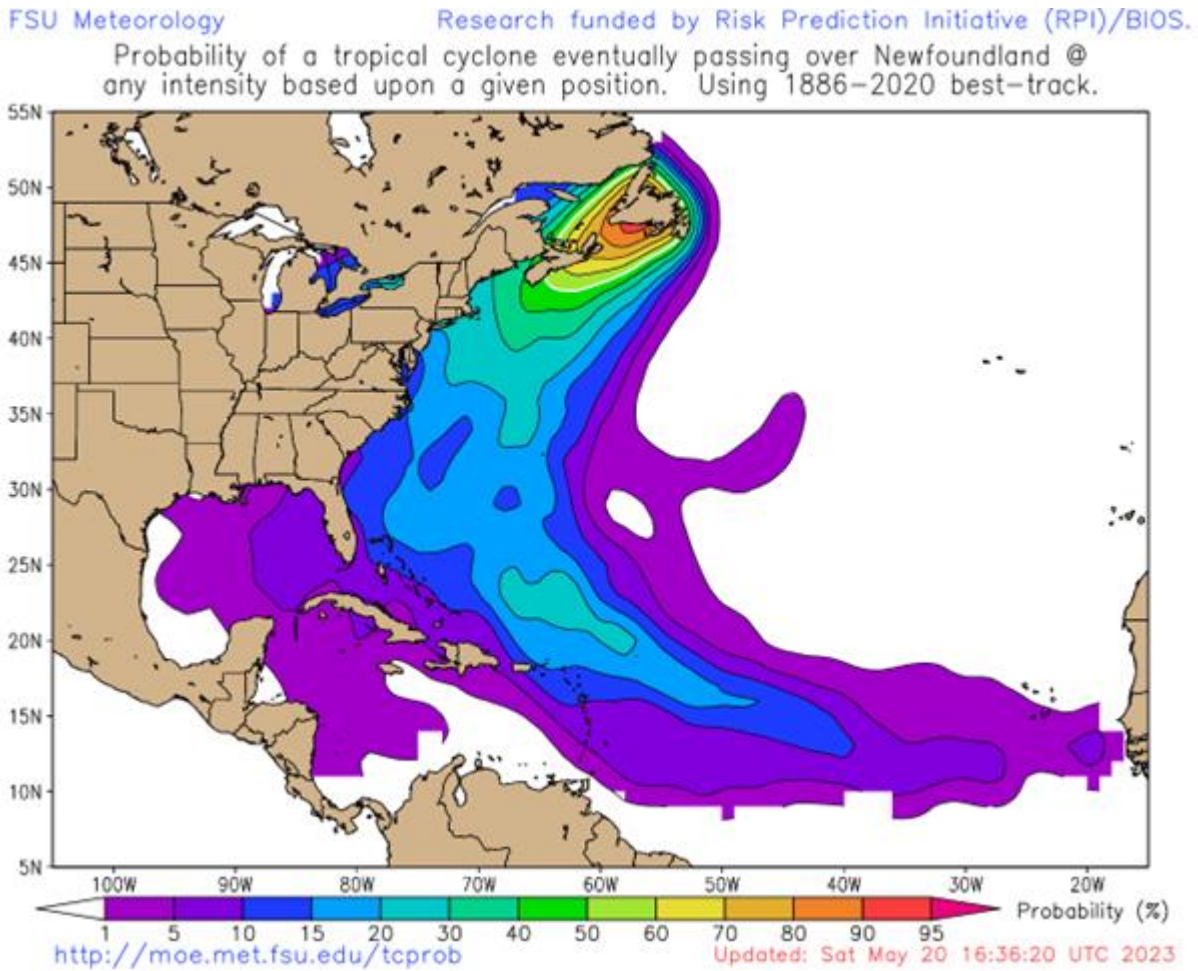


Figure 14 Newfoundland tropical cyclone probability by given position using 1886-2020 Best-track



3. Analog Years and Historical Tracks

Given the projected ENSO conditions, the chosen years are 1997, 2006, 2009, 2015, and 2023, with the 2009 and 2015 as the likely best analogs of the five as they better match the Atlantic MDR SSTs. 2023 is a good ENSO match but the MDR SSTs were far warmer. Figure 15 shows the upper air (500 hPa) geopotential height (m) composite anomaly based on 1991-2020 climatology for the period from June through November for the combined analog years. Figure 16 shows the same as Figure 15 except for September only (peak season). There are a few interesting pattern findings here, with troughing over the southeast US and east of Newfoundland, especially near peak season, which is less conducive for land impacts from potential existing tropical cyclones. Also, the areas of below-normal geopotential heights are associated with increased wind shear stretching from the northern Gulf of Mexico, off the US east coast and into the central Atlantic. There's a separate area of anomalous wind shear over the Caribbean, which is canonically associated with El Niño.

Figure 15 Upper-air (500 hPa) Geopotential Height (m) composite anomaly for June through November for the analog years

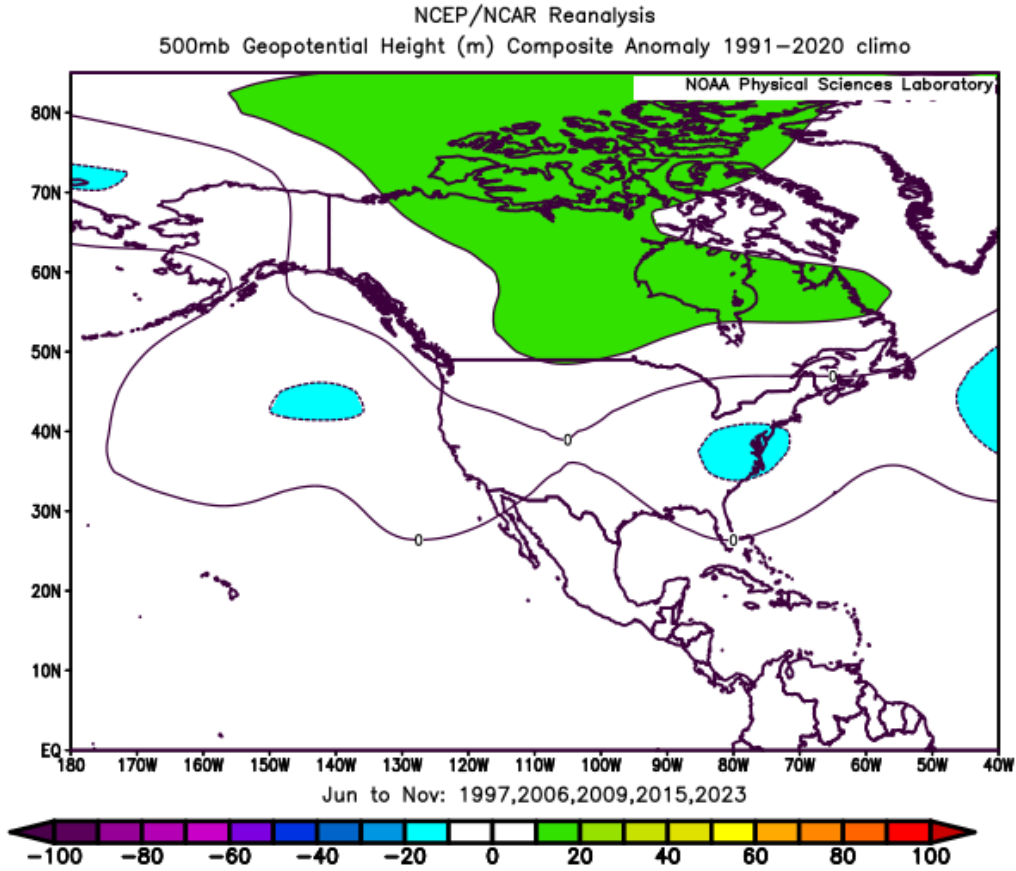
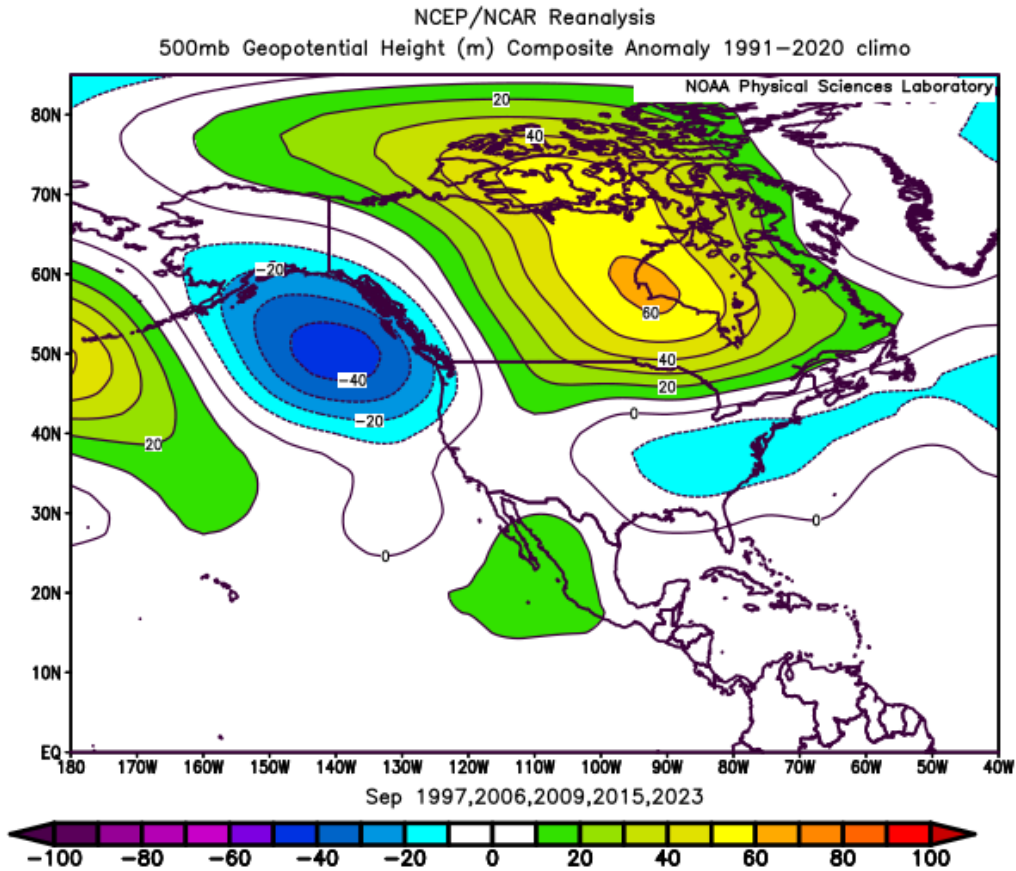


Figure 16 Same as Figure 15 except September only



The hurricane track charts for the analog years are given in (Figure 17, Figure 18, Figure 19, Figure 20, and Figure 21). Generally, the analog years depict a below normal hurricane season but with some variability. The analog average is 11.6 storms, 4.4 hurricanes, 2 major hurricanes, and an ACE of 76.6. Only one analog, 2023, was above normal.

Impacts during the analog years to select Newfoundland municipalities are shown in more detail in Table 2, Table 3, and Table 4.

Table 2 2006 Tropical Storm, hurricane, and remnant impacts for select municipalities

	Beryl (Remnant)		Florence (Remnant)		Isaac (Tropical Storm)	
	Rain (mm)	Wind (km/h)	Rain (mm)	Wind (km/h)	Rain (mm)	Wind (km/h)
St. John's	Trace	61	49.0	102	17.4	54
Gander	0.2	44	58.8	74	18.2	52
Stephenville	16.6	50	Trace	52	18.8	72



Table 3 2009 Tropical Storm, hurricane, and remnant impacts for select municipalities

Bill (Tropical Storm)		
	Rain (mm)	Wind (km/h)
St. John's	39.8	80
Badger	39.3	48
Bonavista	30.4	91
Terra Nova	29.8	59
St. Lawrence	45.8	96
Gander	76.4	59
Deer Lake	30.2	44
Corner Brook	10.8	44
Stephenville	11.9	46

Table 4 2023 Tropical Storm, hurricane, and remnant impacts for select municipalities

Lee (Remnant)		
	Rain (mm)	Wind (km/h)
St. Anthony	41.5	61
Blanc Sablon	NA	67
Mary's Harbour	59.0	50
Ferolle Point	28.8	47



Figure 17 North Atlantic Hurricane Tracking Chart (2023) (NHC, 2026)

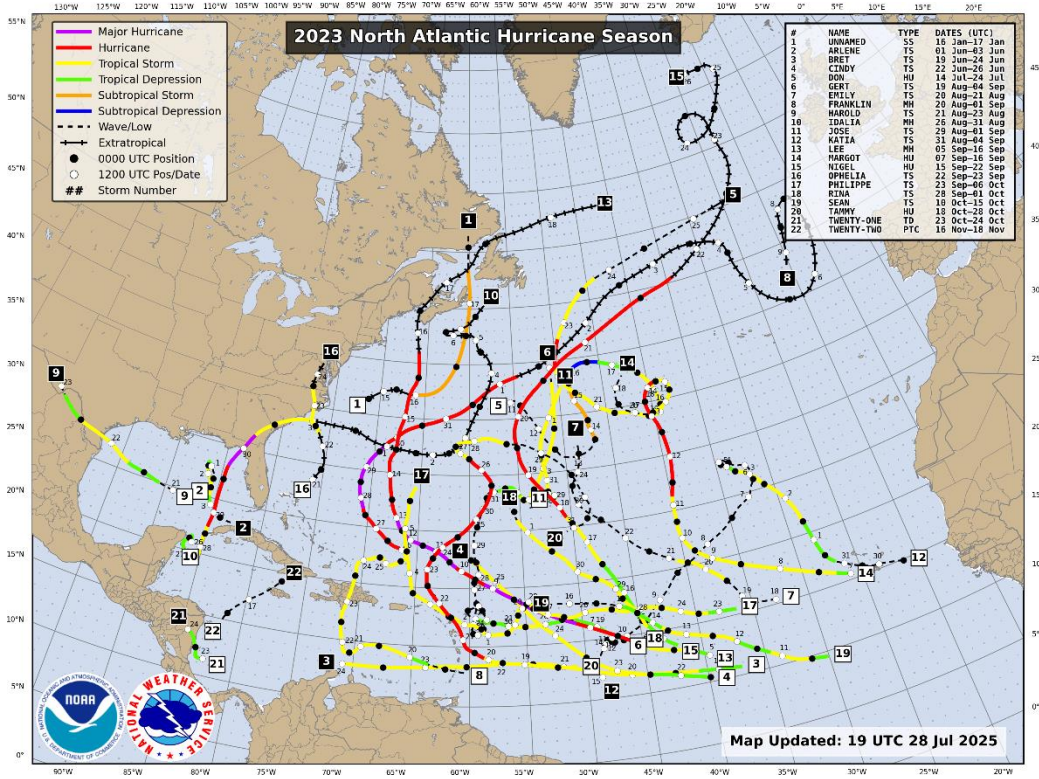


Figure 18 Same as Figure 14 except 2015 (NHC, 2026)

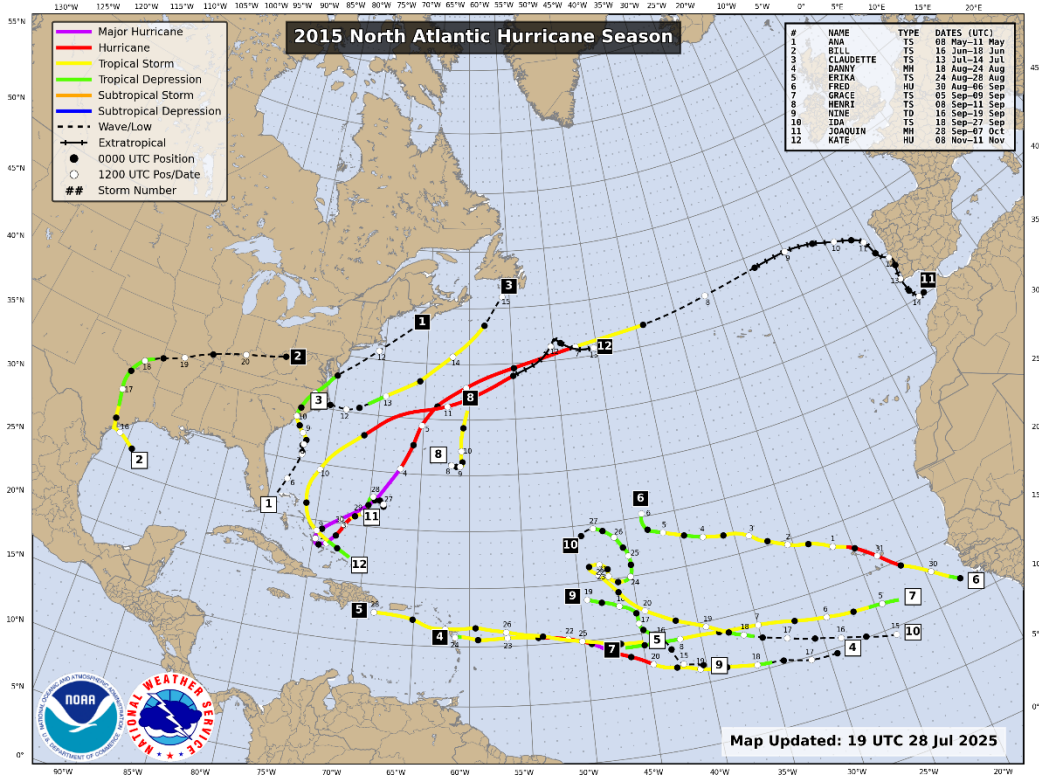




Figure 19 Same as Figure 14 except 2009 (NHC, 2026)

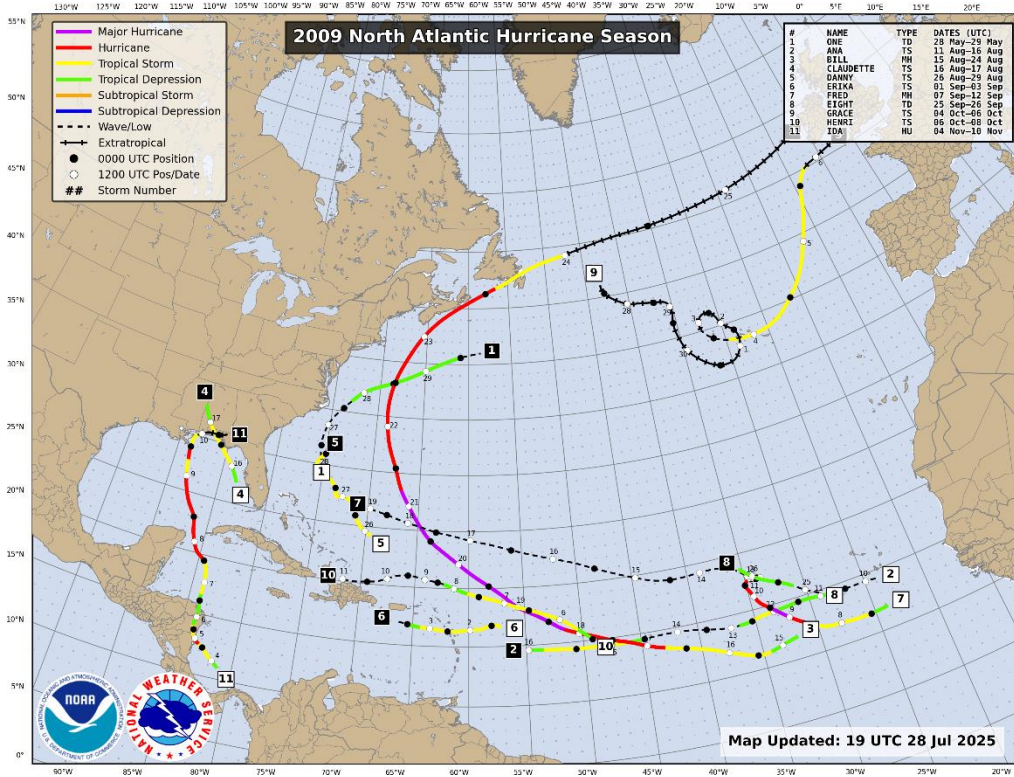


Figure 20 Same as Figure 14 except 2006 (NHC, 2026)

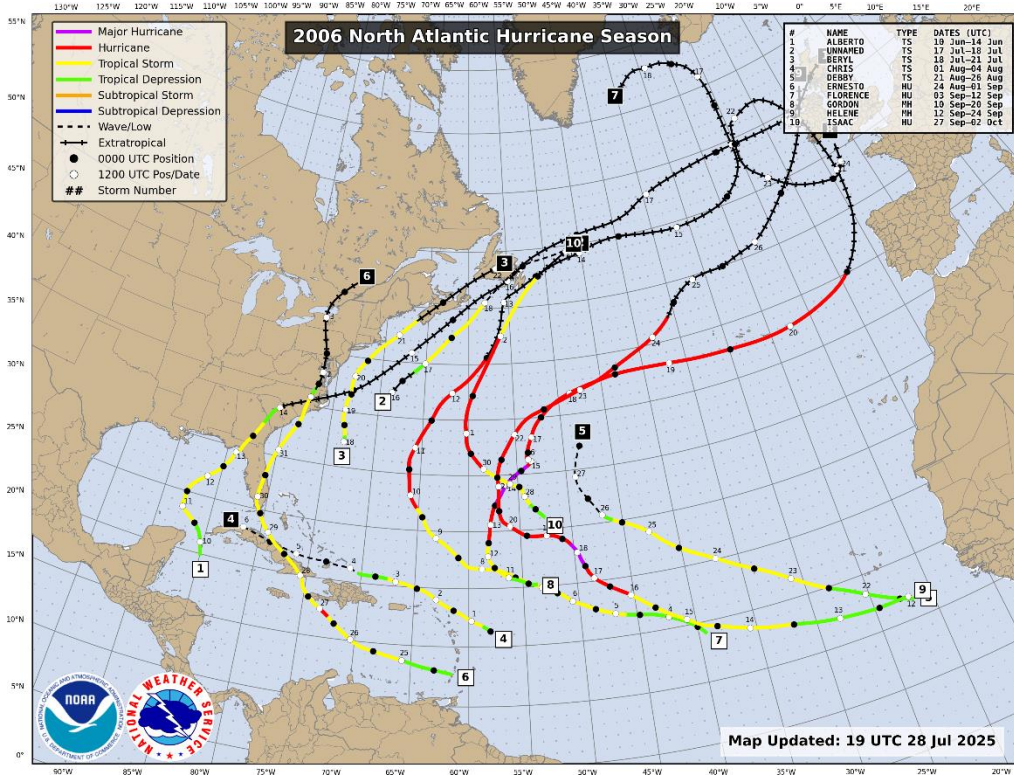
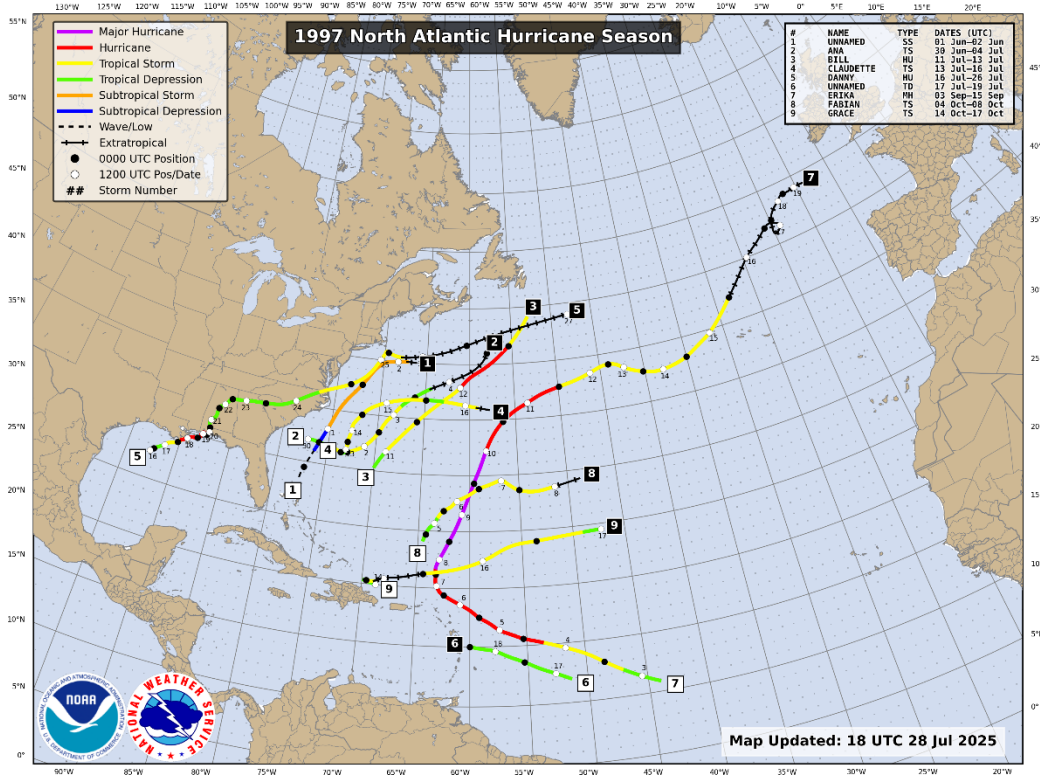




Figure 21 Same as Figure 14 except 1997 (NHC, 2026)



4. Newfoundland and Labrador Hurricane Season Outlook 2026

WSP anticipates a below-normal season for Newfoundland and Labrador, with a lower than typical risk of tropical storms, hurricanes, and post-tropical remnants for Newfoundland and a very low risk for Labrador (Figure 22, Figure 23). The risk for Newfoundland is higher than that of Labrador because Newfoundland averages over 1 impact from a tropical storm, hurricane, and remnant per year while Labrador averages an impact about 3 times per 10 years. Despite the below-normal hurricane season prediction, flooding was still observed in the analog years discussed. There was flooding in Middle Arm in October 2006 and there were two flooding events noted in 2023: one that caused a road washout to the eastern Northern Peninsula in June near St. Anthony and another in July that caused flooding on the Trans-Canada Highway near Port aux Basques. Both are examples that a considerable amount of flooding occurring in Newfoundland and Labrador on a year-to-year basis is not the result of tropical systems but a combination of showers, thunderstorms, and rain from typical extratropical lows, especially in the fall.

Figure 22 Newfoundland Hurricane Season Risk Map

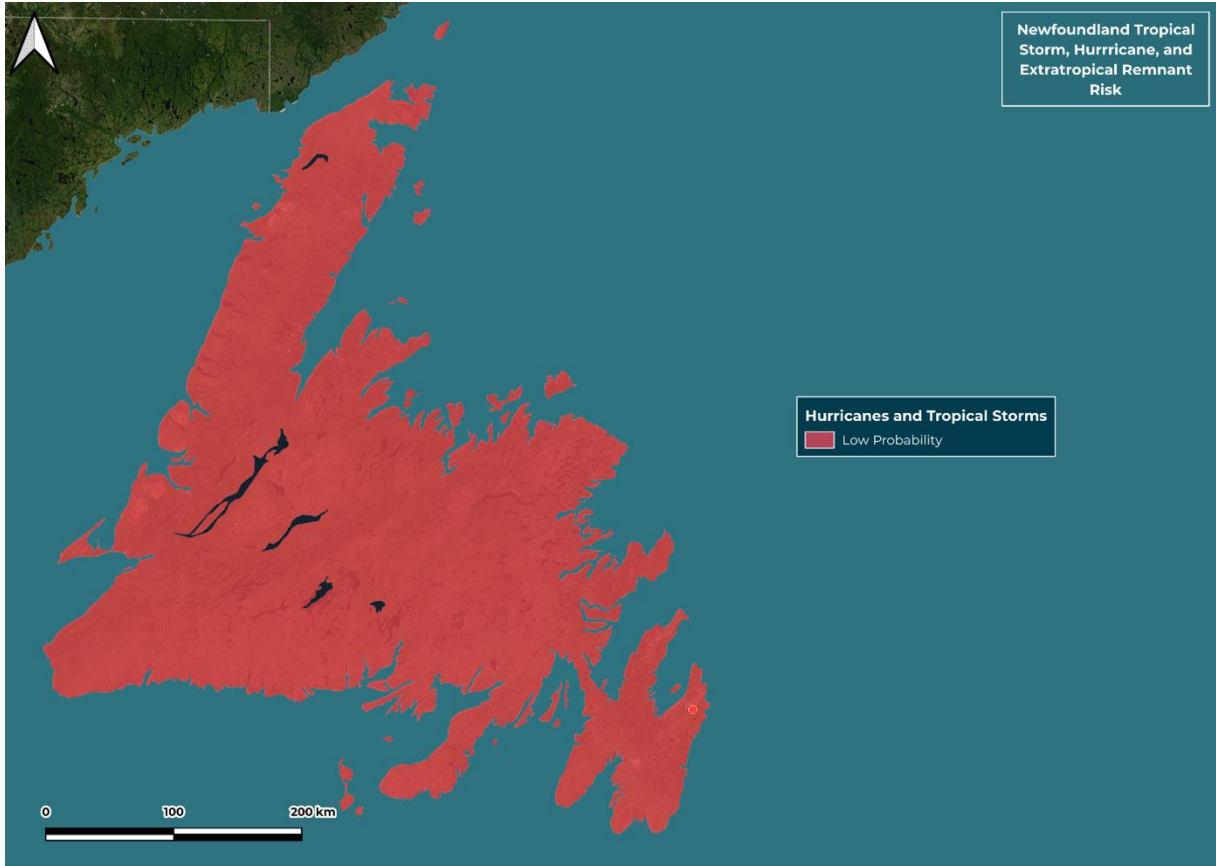


Figure 23 Same as Figure 18 except Labrador



5. Bibliography

- American Meteorological Association, 2026. *AMS Glossary of Meteorology - El Niño*. [Online]
Available at: <https://glossary.ametsoc.org/wiki/el-ni-o/>
[Accessed 4 May 2026].
- American Meteorological Association, 2026. *AMS Glossary of Meteorology - ENSO*. [Online]
Available at: <https://glossary.ametsoc.org/wiki/enso/>
[Accessed 4 May 2026].
- American Meteorological Association, 2026. *AMS Glossary of Meteorology - La Niña*. [Online]
Available at: <https://glossary.ametsoc.org/wiki/la-ni-a/>
[Accessed 4 May 2026].
- Boreham, A., 2019-2026. *CyclonicWx*. [Online]
Available at: <https://cyclonicwx.com/sst/>
[Accessed 4 May 2026].
- Climate Prediction Center Internet Team, 2026. *Official NOAA CPC ENSO Probabilities*. [Online]
Available at: https://cpc.ncep.noaa.gov/products/analysis_monitoring/enso/roni/probabilities.php
[Accessed 4 May 2026].
- Climate Prediction Center Internet Team, 2026. *Official NOAA CPC ENSO Strength Probabilities*. [Online]
Available at: [2026](#)
[Accessed 4 May 2026].
- Cowan, L., 2026. *Tropical Tidbits Ocean Analysis*. [Online]
Available at: <https://www.tropicaltidbits.com/analysis/ocean/>
[Accessed 24 May 2026].
- ECMWF, 2026. *ECMWF Charts Catalogue*. [Online]
Available at: <https://charts.ecmwf.int/>
[Accessed 24 May 2026].
- Gray, K. a., 2008. *CSU Atlantic Multi-Decadal Oscillation (AMO) Index*. [Online]
Available at: https://tropical.colostate.edu/archive_amo.html
[Accessed 25 May 2026].
- Klotzbach, P. J. et al., 2026. *Extended Range Forecast for Atlantic Seasonal Hurricane Activity and Landfall Strike Probability for 2026*. [Online]
Available at: <https://tropical.colostate.edu/Forecast/2026-04.pdf>
[Accessed 9 May 2026].
- Lea, A., 2026. *Tropical Storm Risk*. [Online]
Available at: <https://www.tropicalstormrisk.com/docs/TSRATLForecastApril2026.pdf>
[Accessed 4 May 2026].
- NHC, 2026. *NHC Data Archive*. [Online]
Available at: <https://www.nhc.noaa.gov/data/>
[Accessed 25 May 2026].



NOAA, 2026. *NOAA predicts below-normal 2026 Atlantic hurricane season*. [Online]
Available at: <https://www.noaa.gov/news-release/noaa-predicts-below-normal-2026-atlantic-hurricane-season>

[Accessed 24 May 2026].

Seneviratne, S. X. Z. M. A. W. B. C. D. A. D. L. S. G. I. I. J. K. S. L. F. O. I. P. M. S. S. V.-S. M. W. a. B. Z., 2021. 2021: Weather and Climate Extreme Events in a Changing Climate. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, U.K and New York, NY: Cambridge University Press, pp. 1513-1766.

The Copernicus Climate Change Service (CS3), 2026. *The Copernicus Climate Change Service (CS3) seasonal charts*. [Online]

Available at: https://climate.copernicus.eu/charts/packages/c3s_seasonal/

[Accessed 4 May 2026].

Trenberth, K., Zhang, R. & National Center for Atmospheric Research Staff, 2025. *The Climate Data Guide: Atlantic Multi-decadal Oscillation (AMO) and Atlantic Multidecadal Variability (AMV)*. [Online]

Available at: <https://climatedataguide.ucar.edu/climate-data/atlantic-multi-decadal-oscillation-amo>

[Accessed 4 May 2026].

Yan, T., Bao, S., Leonard, P. J. & Gayes, P. T., 2014. Modal Inter-Comparisons between North Atlantic Accumulated Cyclone Energy and the Atlantic Multi-Decadal Oscillation, and the Pathology of the 2013 Hurricane Season. *Natural Science*, 6(8), pp. 597-604.

wsp



wsp.com