

THE NEW NORMAL

Rick Thoman

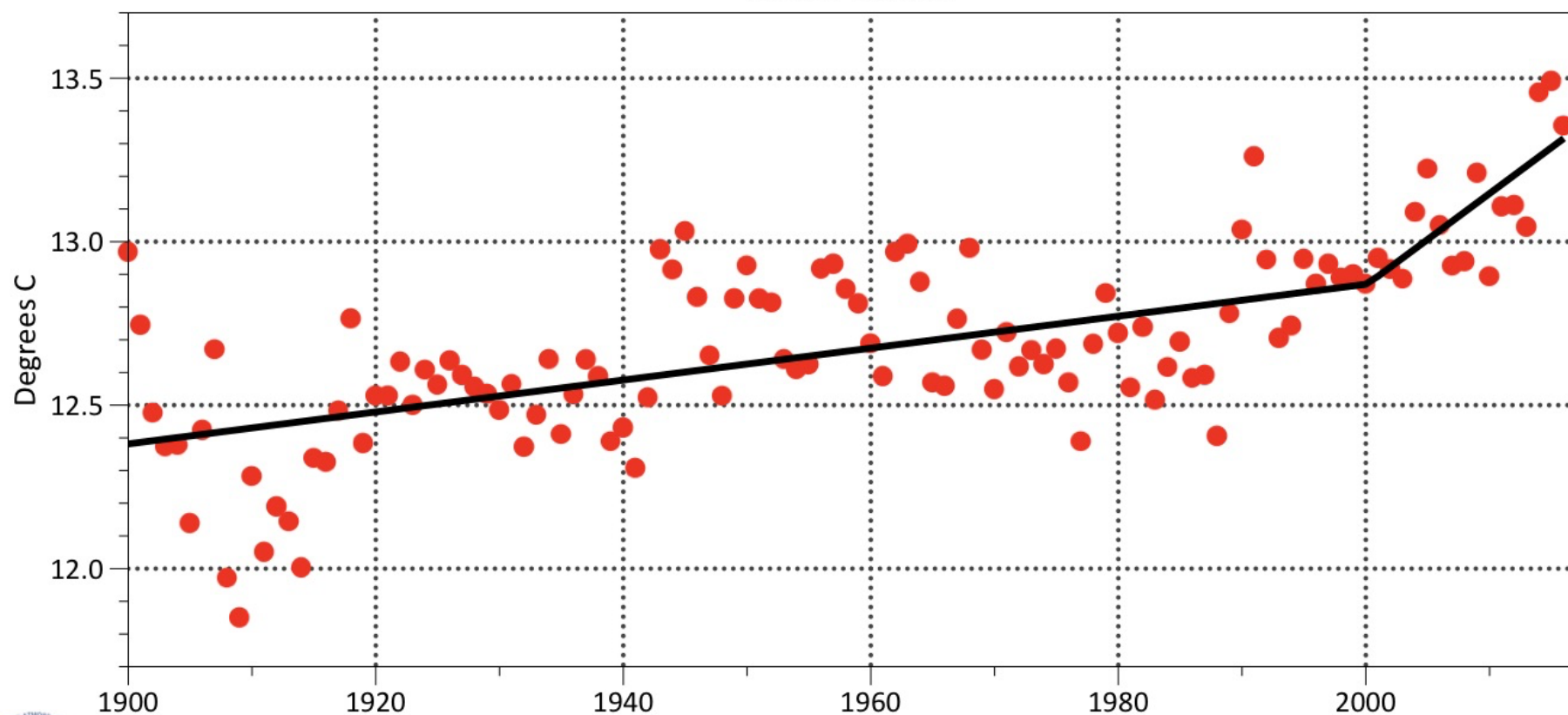
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North Pacific Sea Surface Temperatures

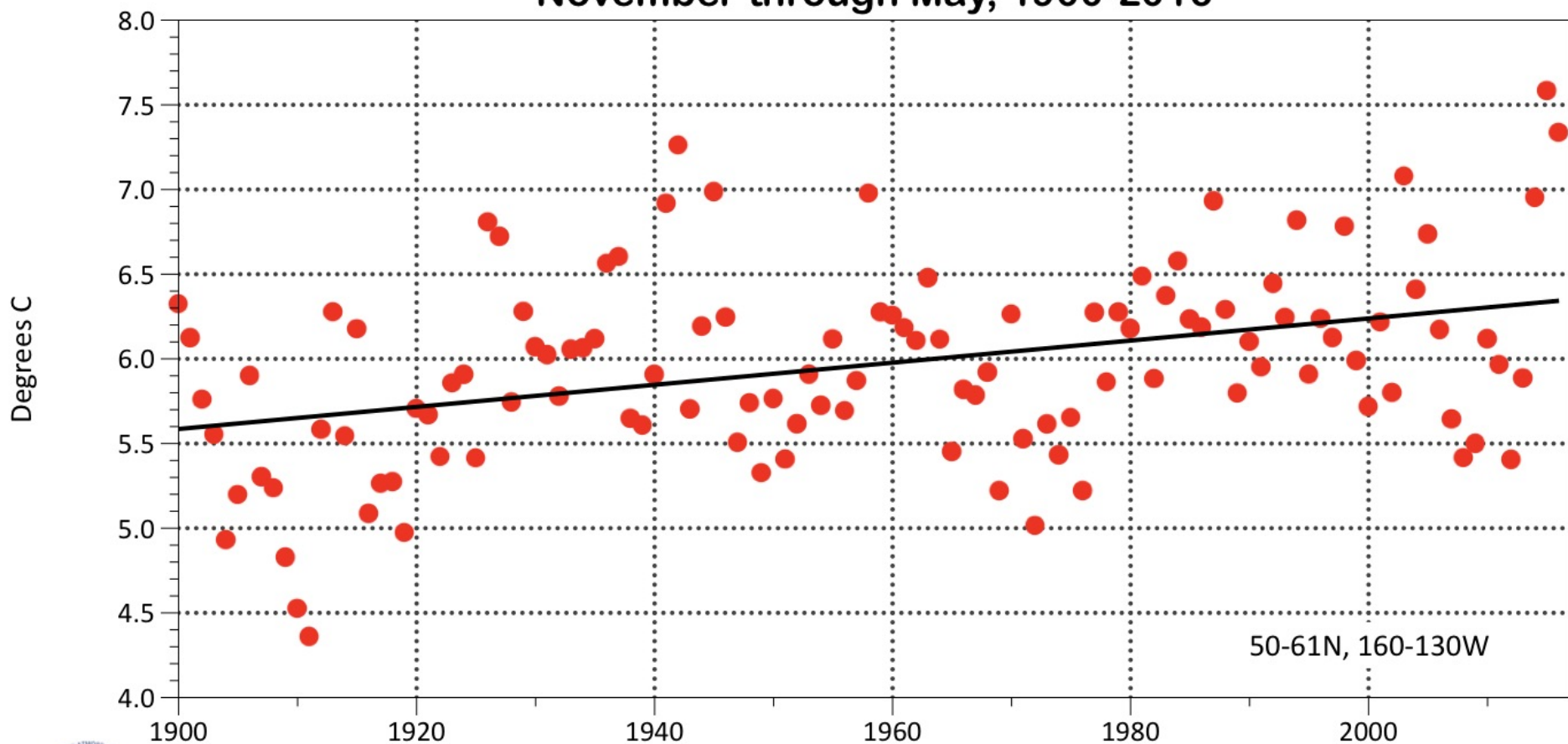
North Pacific Polarward of 30N
July-June Mean Sea Surface Temperature
1900-2016



Data source: ERSSTv4 from NOAA/NCEI and Brian Brettshneider

Gulf of Alaska SSTs: Cold Season

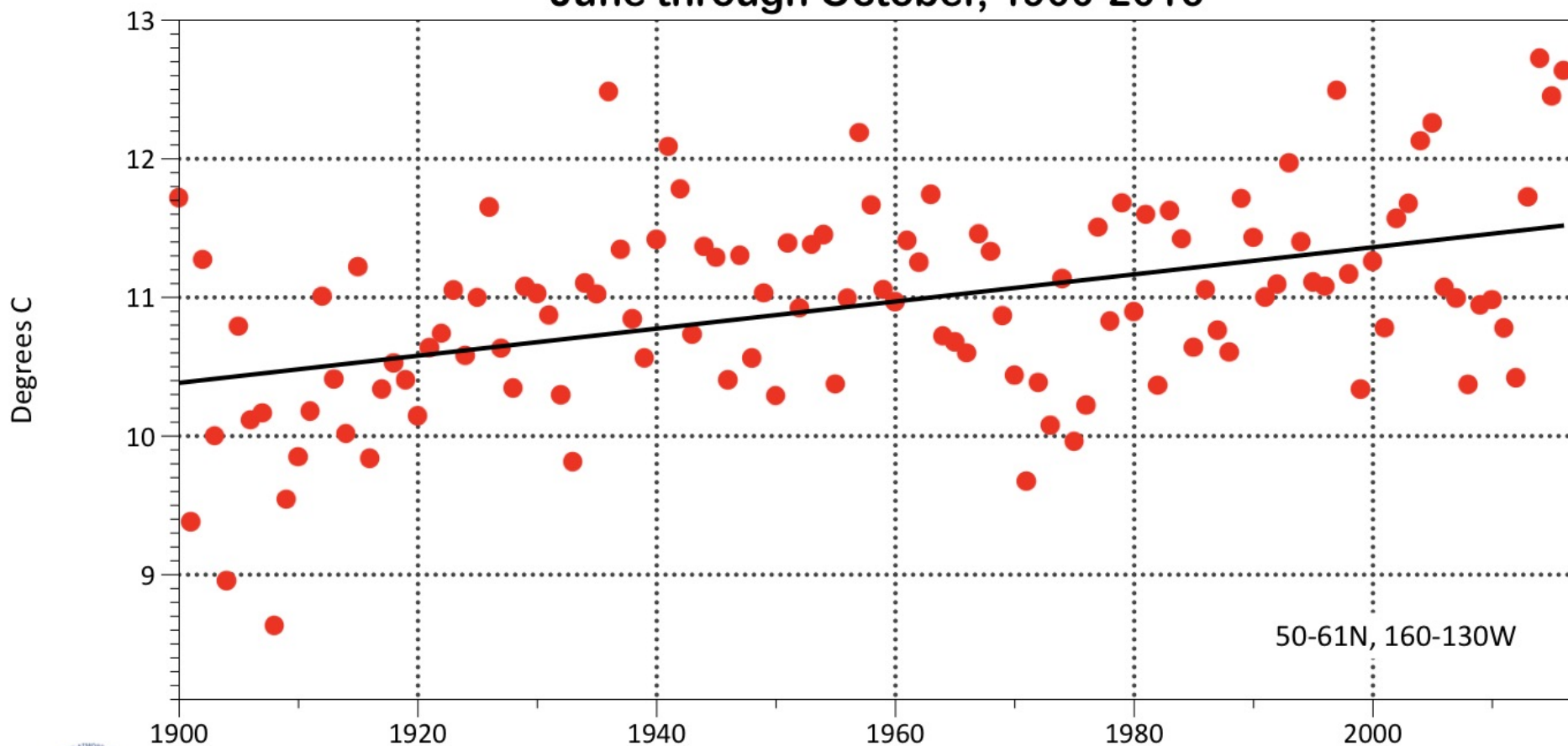
Gulf of Alaska Mean SST
November through May, 1900-2016



Data source: NOAA/NCEI ERSSTv4 & B. Brettscheinder
Graphic by NOAA/NWS Alaska Region Climate Services

Gulf of Alaska SSTs: Warm Season

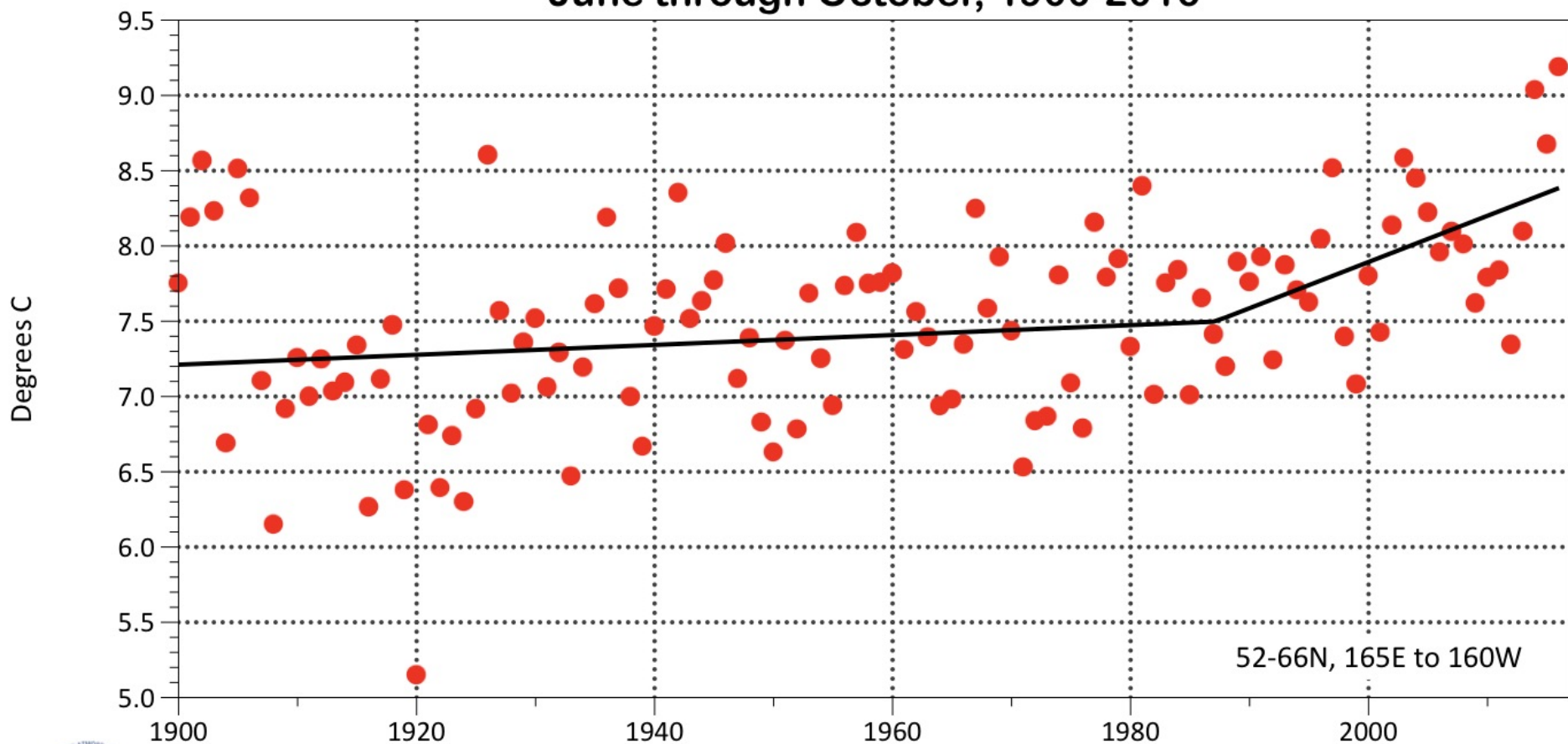
Gulf of Alaska Mean SST
June through October, 1900-2016



Data source: NOAA/NCEI ERSSTv4 and B. Brettscheinder
Graphic by NOAA/NWS Alaska Region Climate Services

Bering Sea SSTs Warm Season

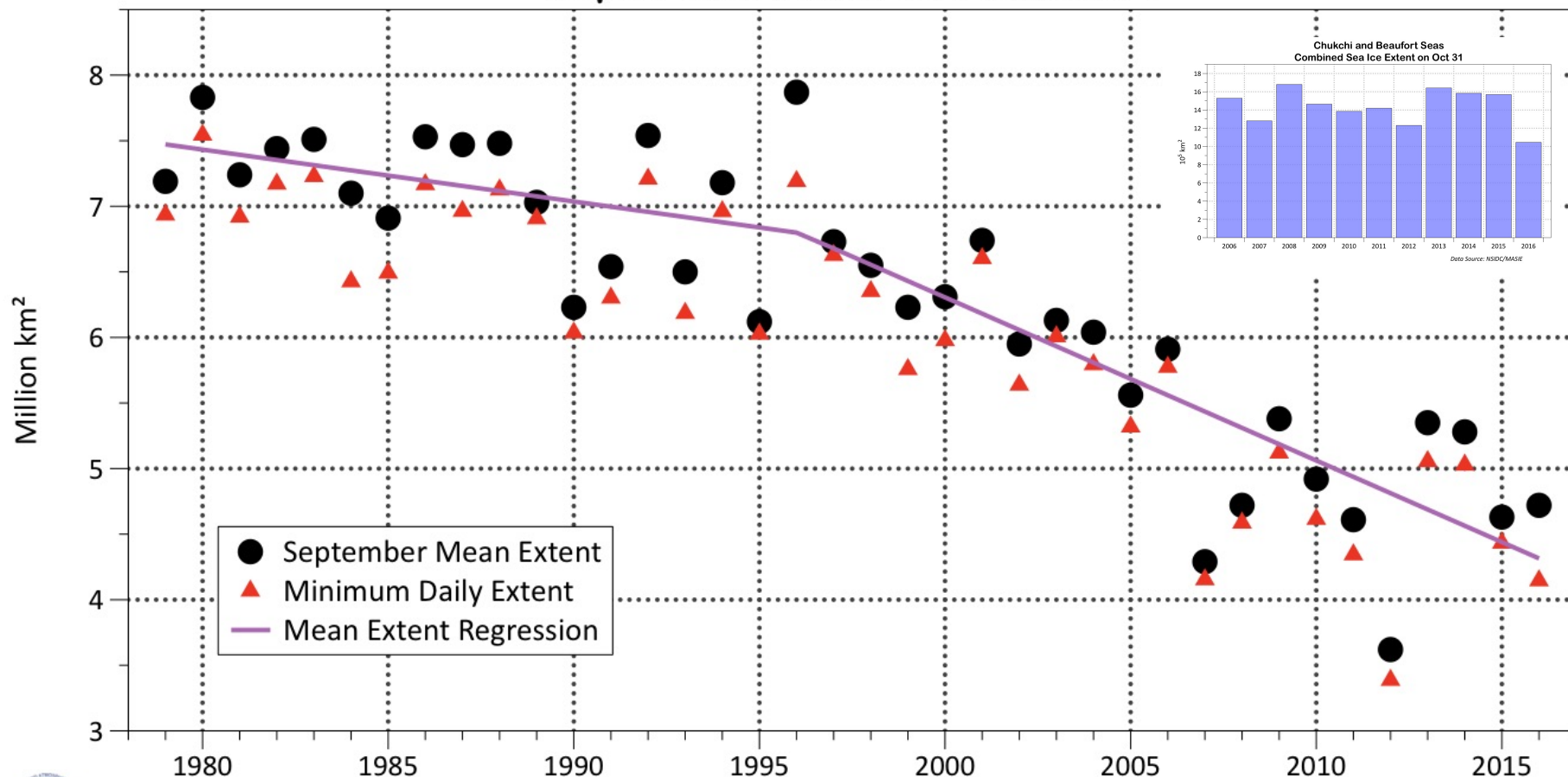
Bering Sea Mean SST
June through October, 1900-2016



Data source: NOAA/NCEI ERSSTv4 and B. Brettscheinder
Graphic by NOAA/NWS Alaska Region Climate Services

Sea Ice Changes

Arctic Sea Ice Extent, 1979-2016 September Mean and Minimum



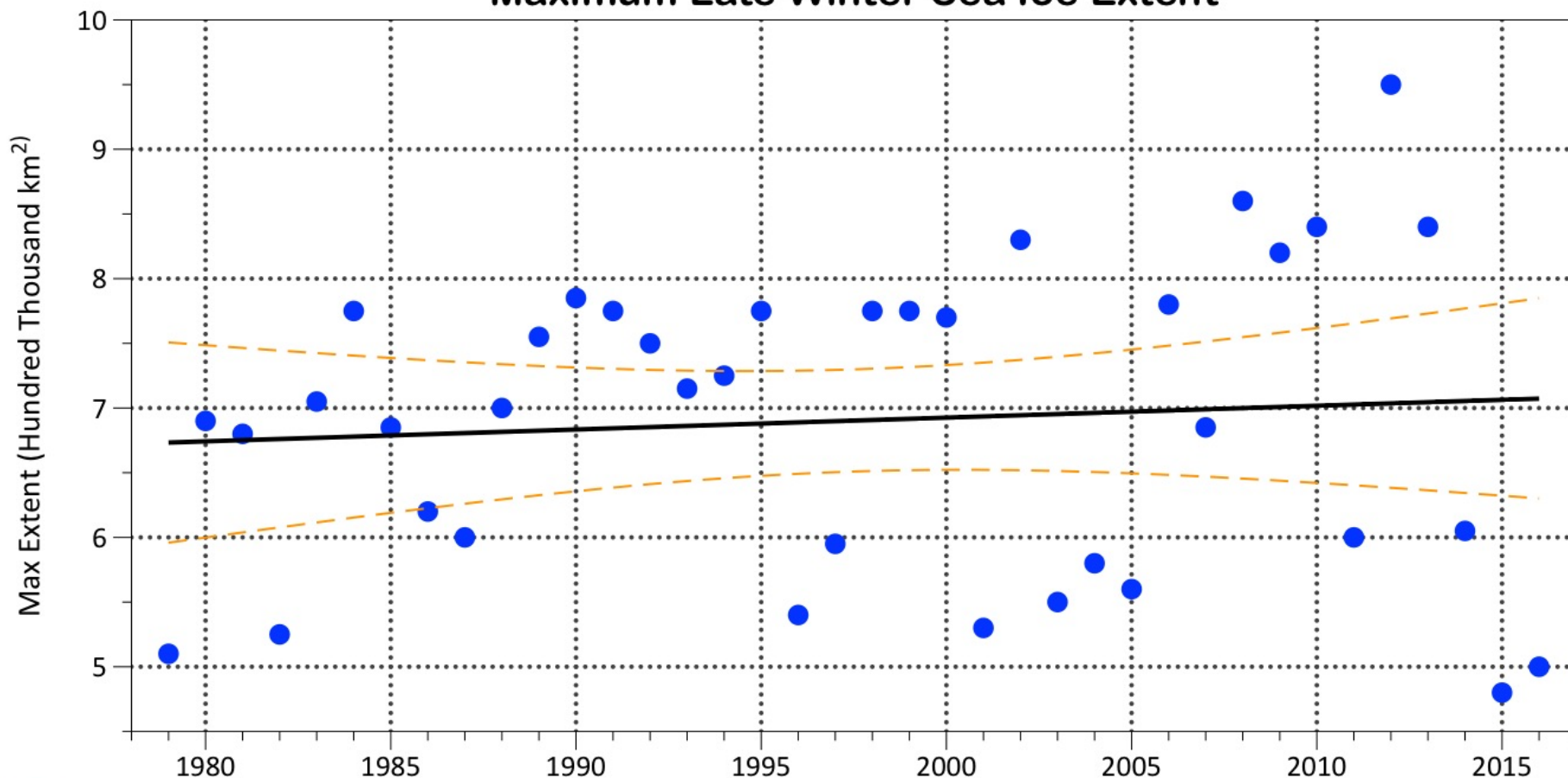
Data Source: NSIDC

Graphic by NWS Alaska Region Climate Services



Bering Sea Ice Extent Maximum

Bering Sea 1979-2016
Maximum Late Winter Sea Ice Extent



Data Source: U. Illinois/Cryosphere Today

Summary

- Oceans around Alaska are warming
- Sea Ice is declining
 - Downward trend greatest in late summer and autumn
 - Marginal Sea Ice late winter extent (Bering Sea) has no trend
 - Does not address changes the “quality” of ice