

# Local Environmental Observer 2016 Climate Review

Rick Thoman

National Weather Service

Feb 21, 2017



# Alaska climate in 2016

## A year of records

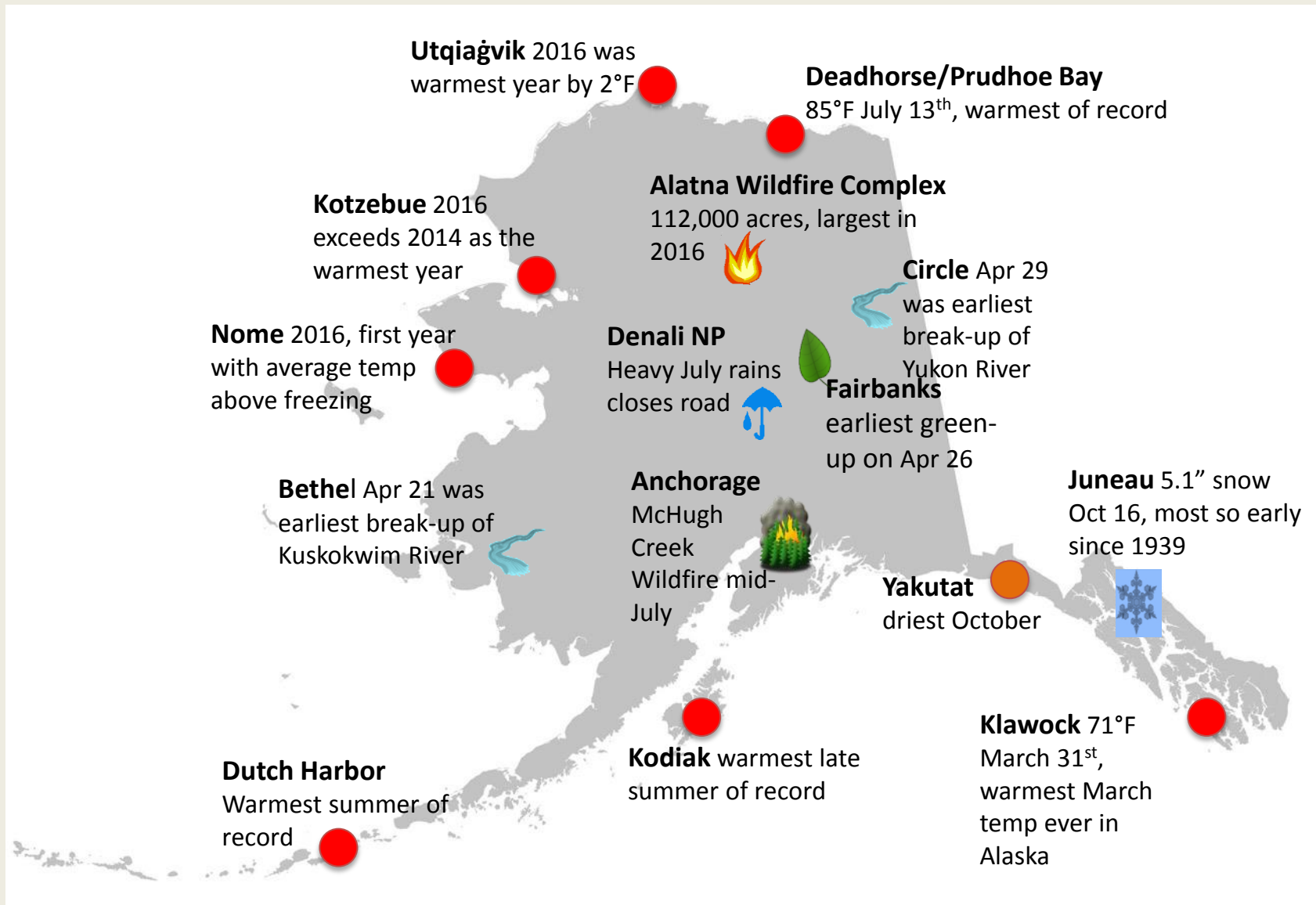
- Warmest year over both land and oceans
- Average wildfire year...but
- Monthly extremes of wet and dry
- Low snow, low sea ice
- Early river ice break-up



Barrow Sea Ice Cam 2016-10-25 15:44:00-0800

Utqiagvik Oct 25, 2016

# 2016 Highlights



# 2016 Alaskan Warmth

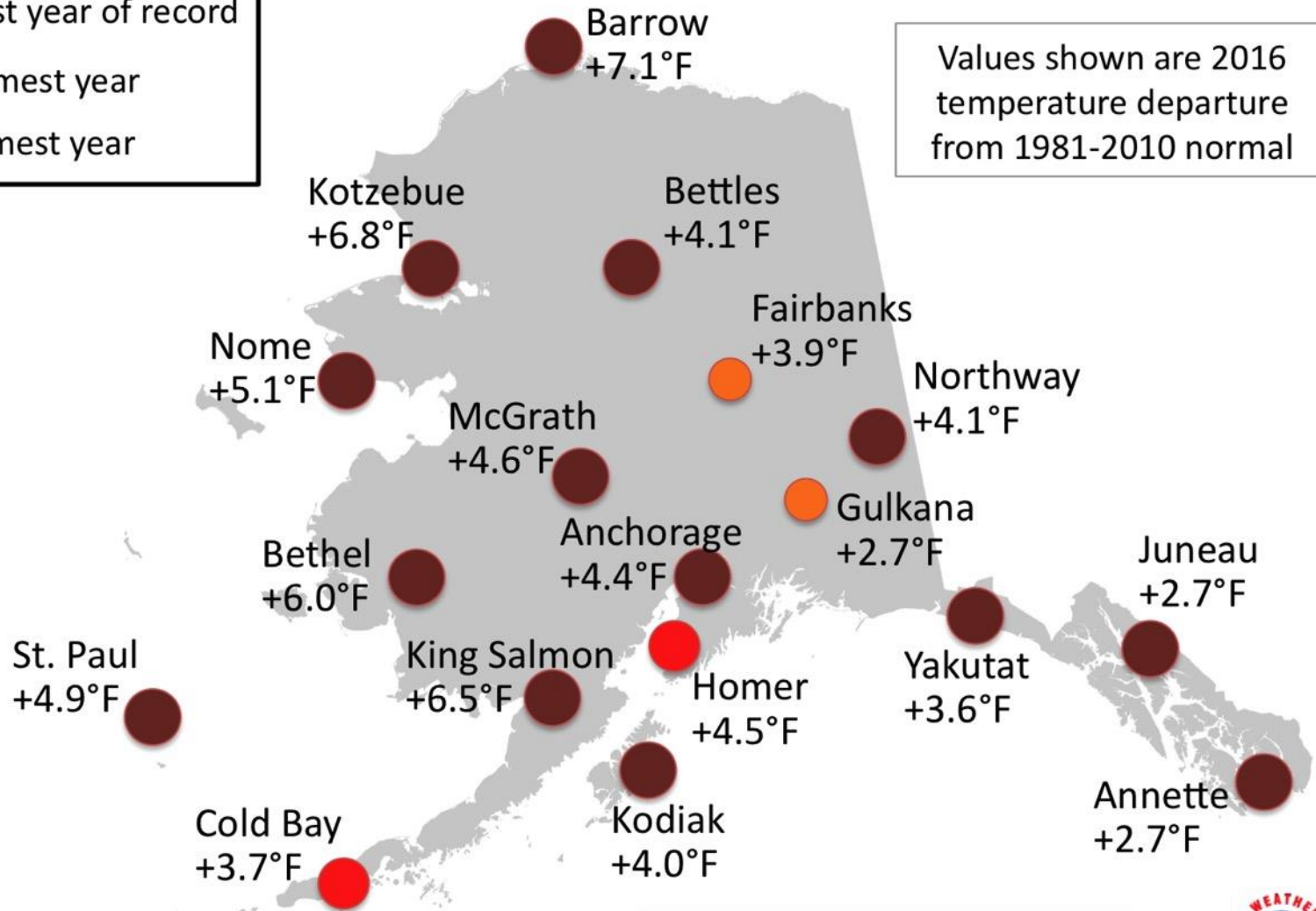


Warmest year of record

2<sup>nd</sup> warmest year

3<sup>rd</sup> warmest year

Values shown are 2016 temperature departure from 1981-2010 normal

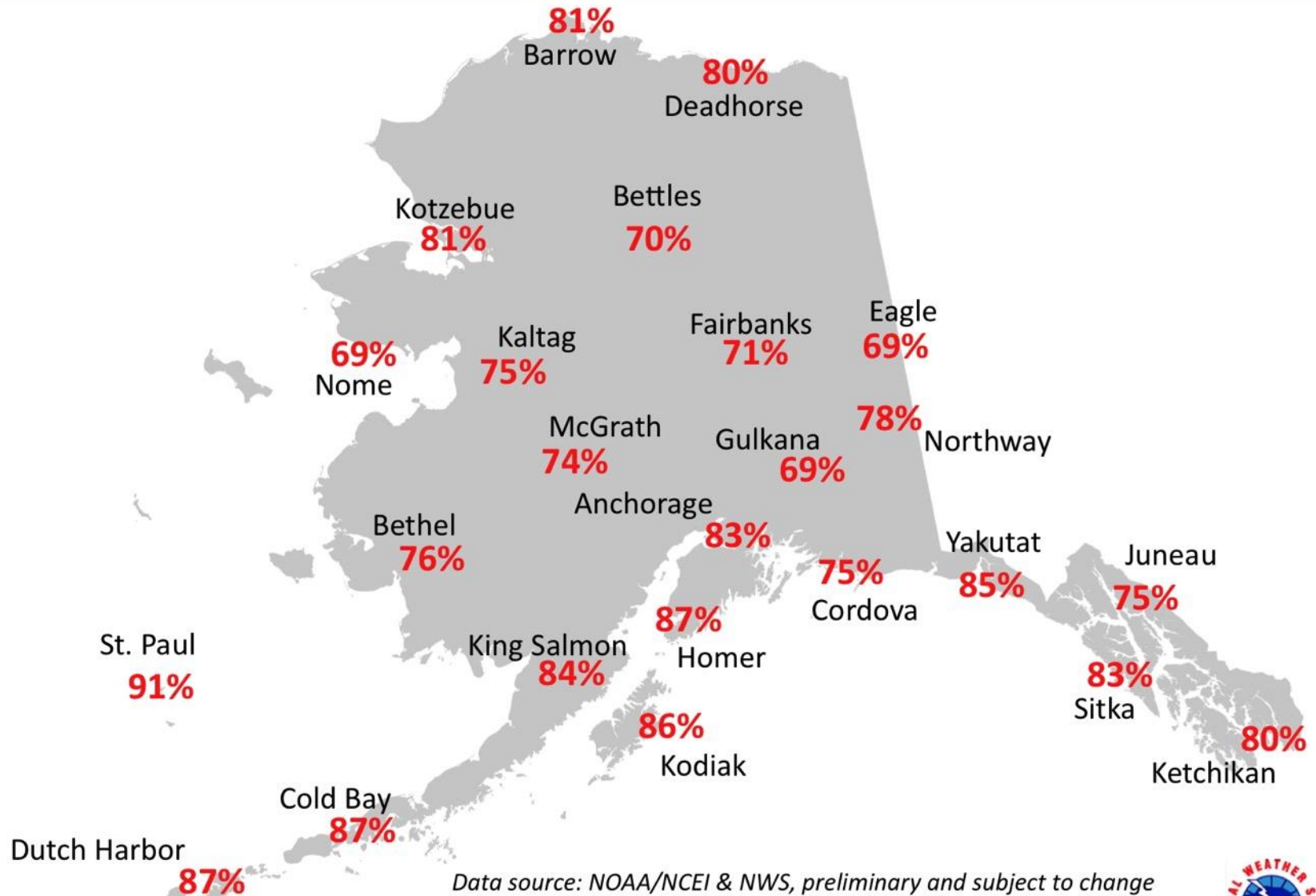


Data preliminary and subject to change



# 2016 Alaska Warmth

## Percent of days above normal

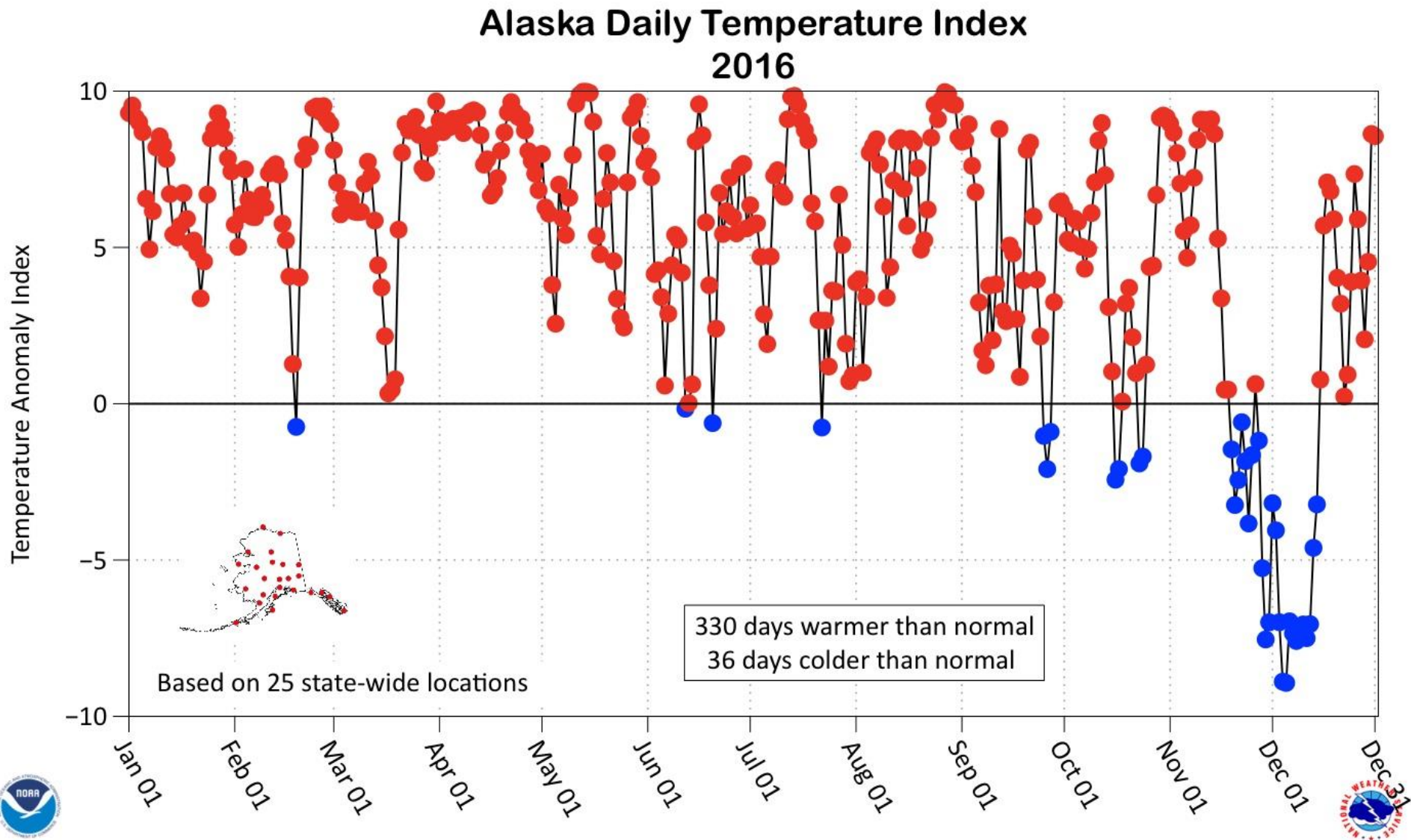


Data source: NOAA/NCEI & NWS, preliminary and subject to change  
Compared to 1981-2010 normals

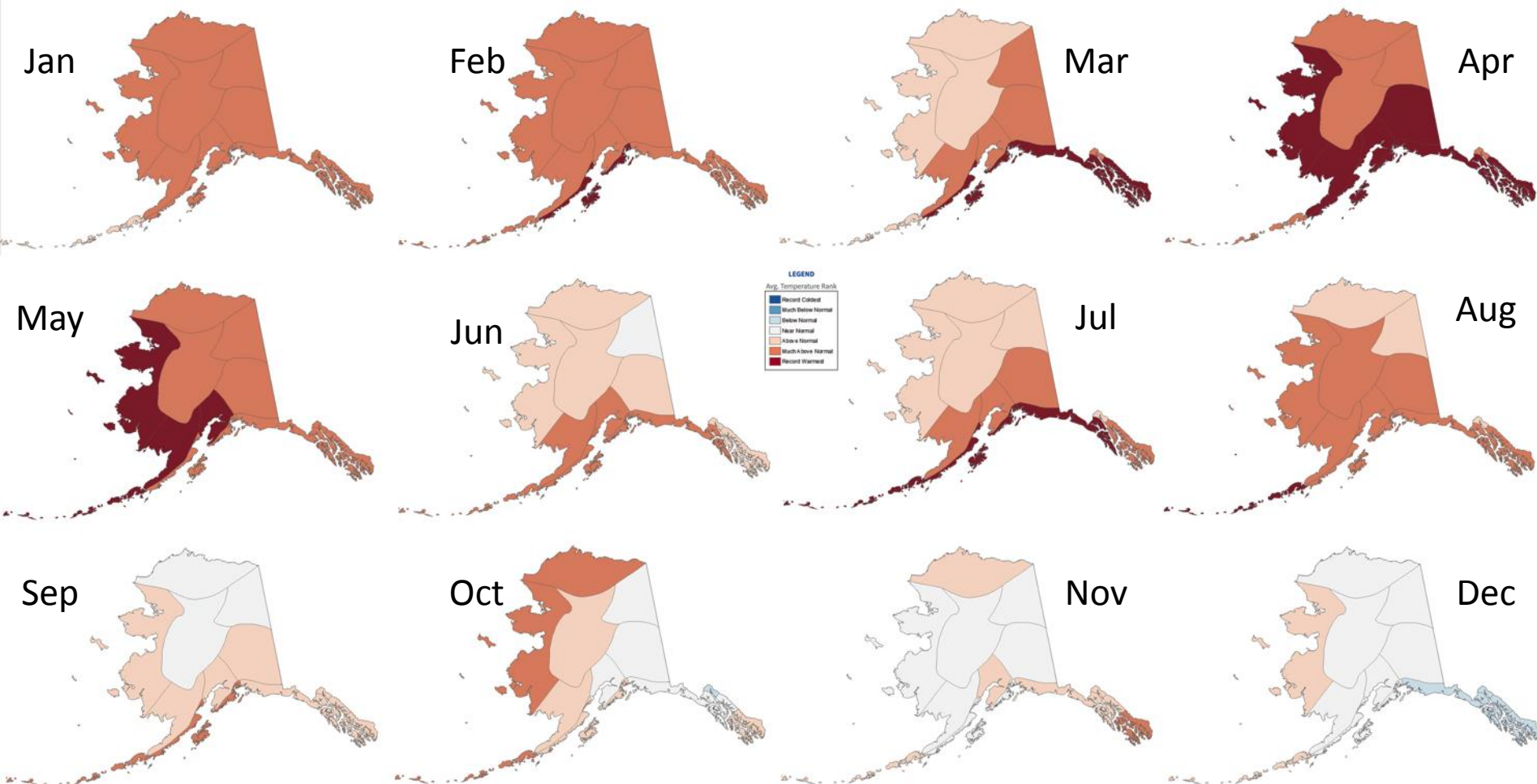




# 2016: Persistent Warmth

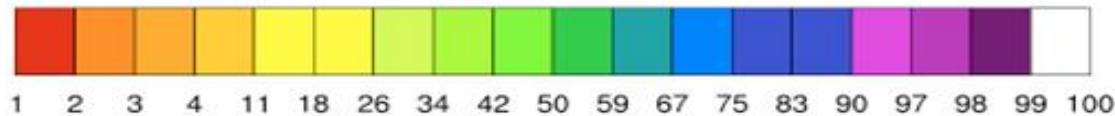
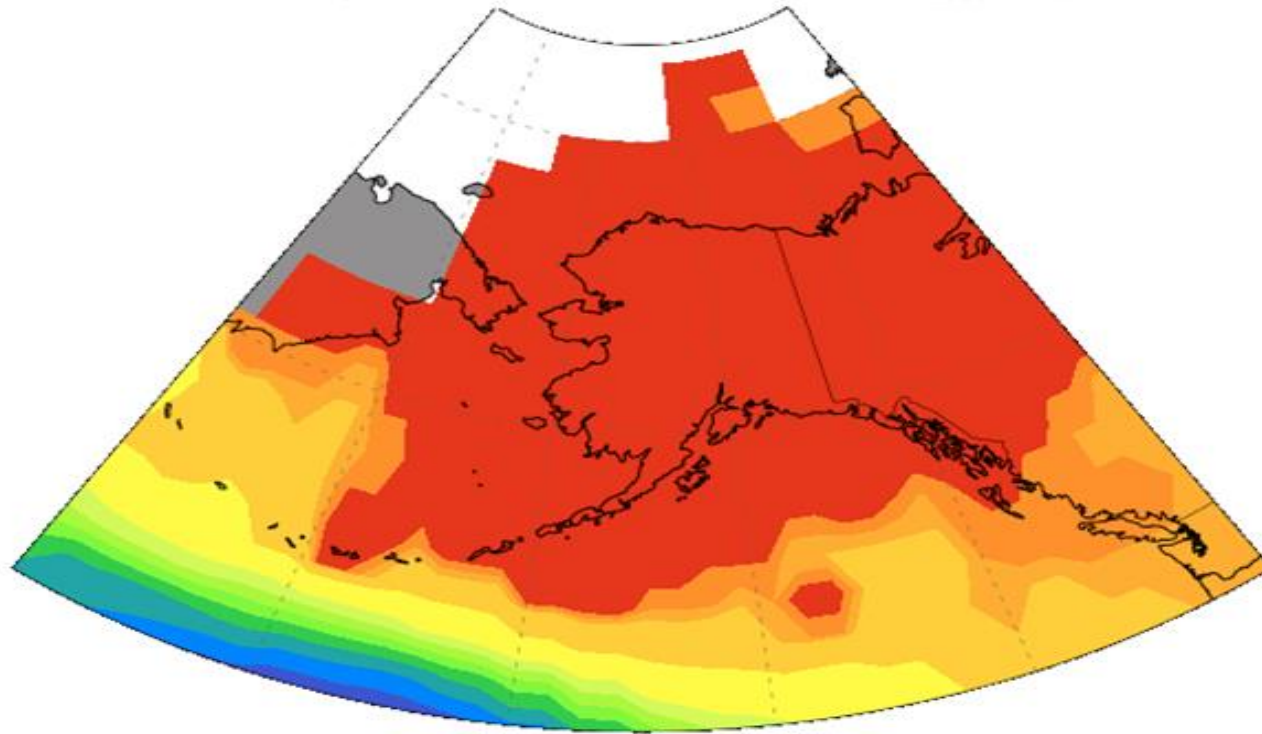


# Warm through the Year



# Rank of 2016 Temperatures Compared to past 100 years

NASA GISS Temps Rank: January 2016 - December 2016



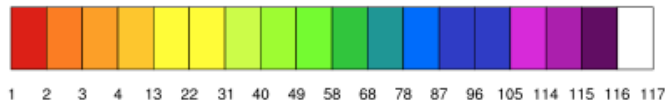
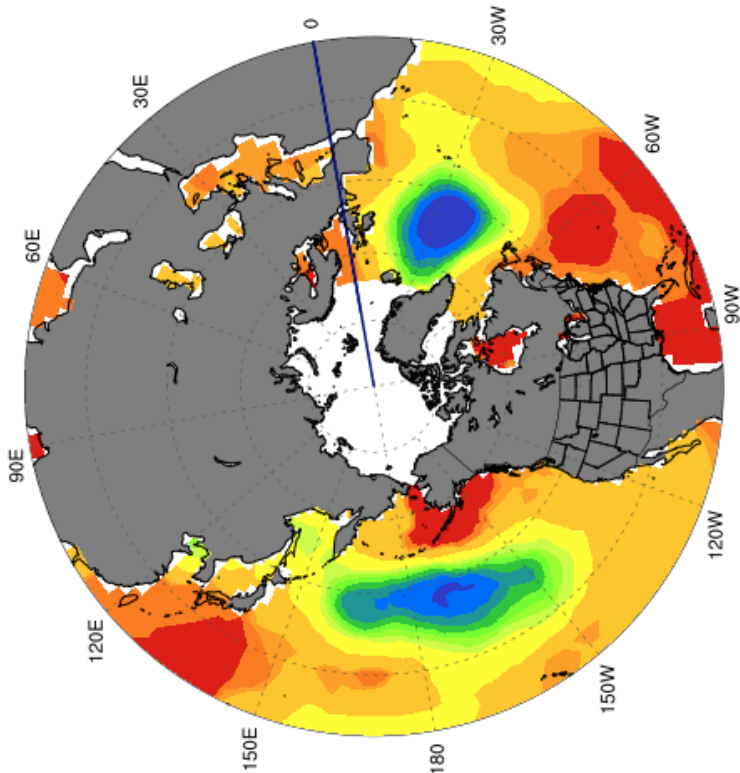
Brian Brettschneider 2017 (Data Source: NASA).  
Ranks are from 1 (High) to 100 (Low). [Since 1917]  
Comparison is with all January - December time periods.

Courtesy:  
B. Brettschneider/WRCC



# Warming Oceans around Alaska

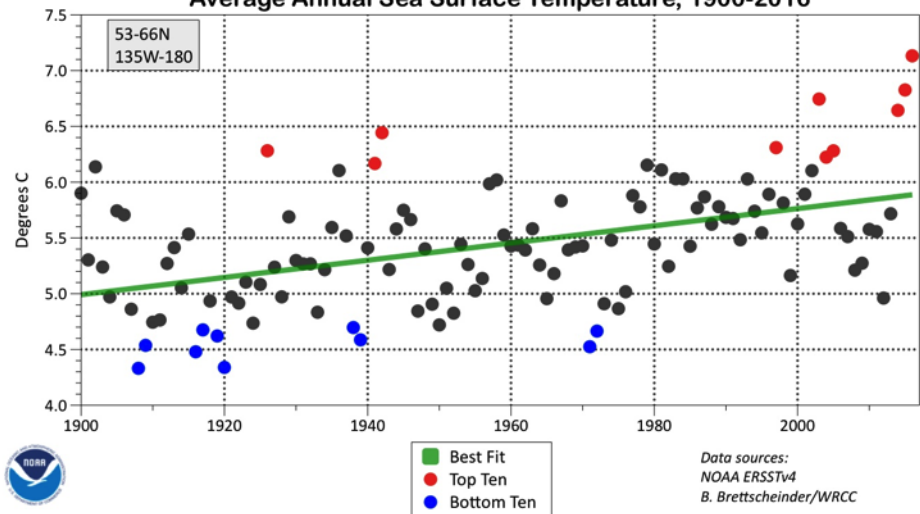
ERSST v4 Temps Rank: January 2016 - December 2016



Overall Rank (lat 90 to 0 & lon 0 to 360) is 2 out of 117.  
Pct ranked #1 is: 10.1%. Pct ranked #117 is: 0.0%.

Brian Brettschneider 2017 (Data Source: NOAA).  
Ranks are from 1 (High) to 117 (Low). [Since 1900]  
Comparison is with all January - December time periods.

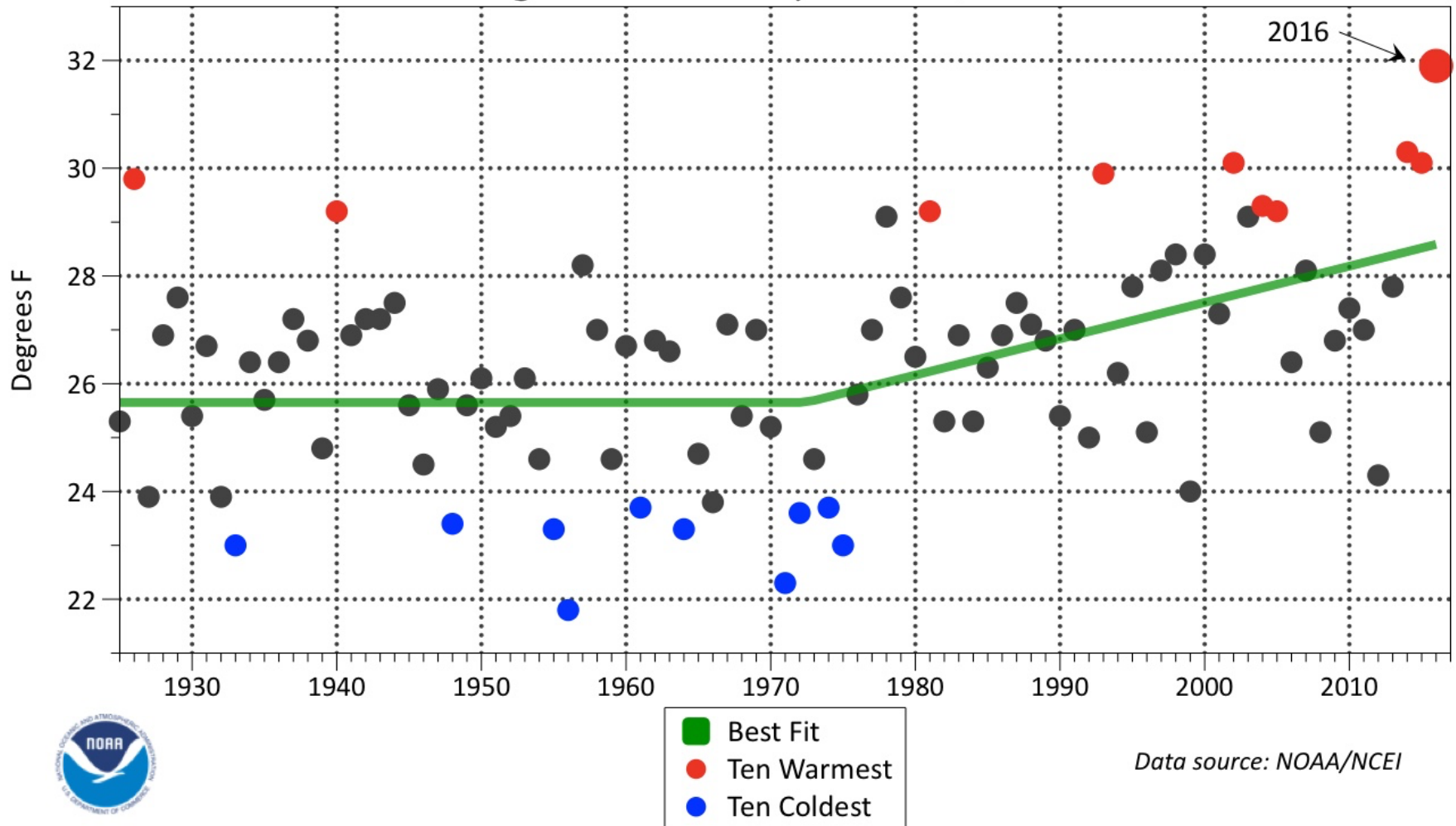
Seas Around Alaska (Gulf of Alaska & Bering Sea)  
Average Annual Sea Surface Temperature, 1900-2016



Data sources:  
NOAA ERSSTv4  
B. Brettschneider/WRCC

# Alaska Yearly Temperatures

Alaska Statewide  
Average Annual Temperature, 1925-2016



# Three-Year Alaska Temperatures

Alaska Three-Year Average Temperature  
1927-2016

