

Alaska Statewide Climate Summary

September 2014

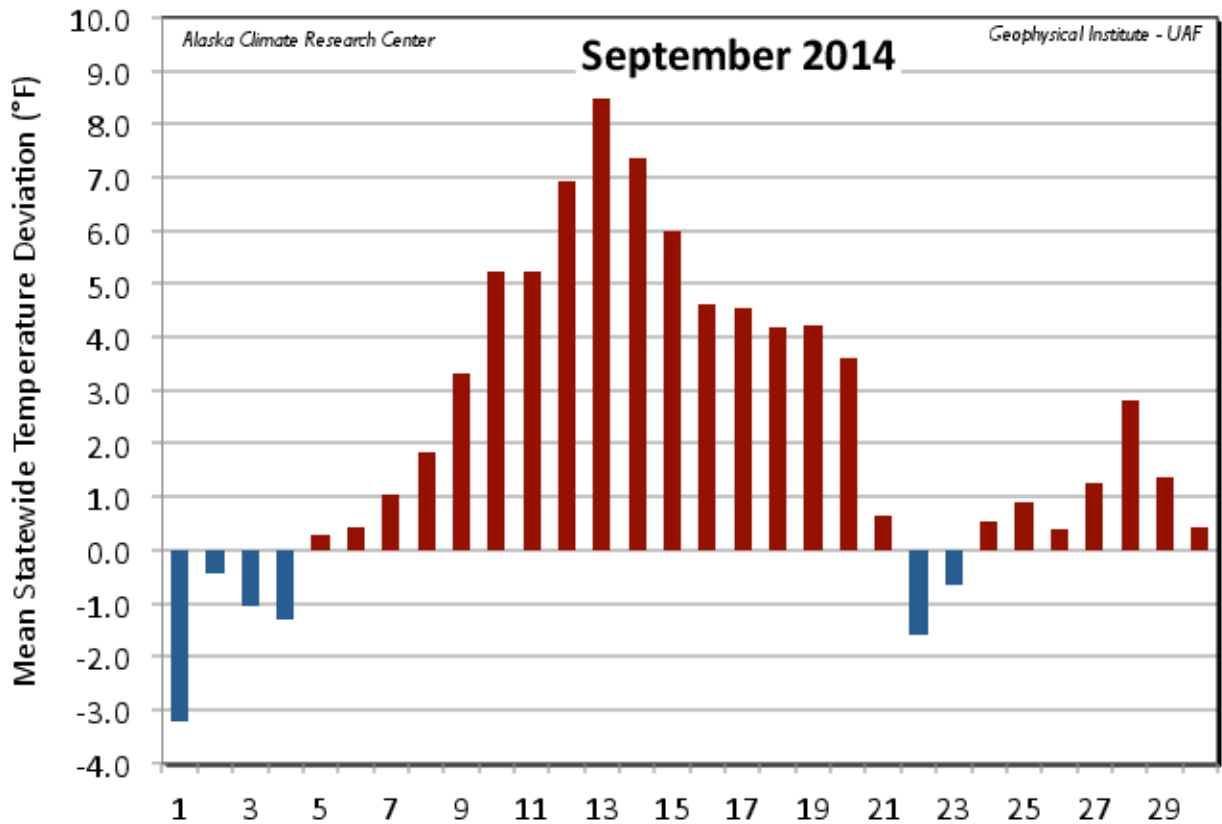
Temperature

Continuing the trend from August, September 2014 temperatures were decidedly above normal across the state, with all 19 of the First Order Stations reporting positive deviations. Calculating the mean daily temperatures of the 19 First Order Stations (see Figure), 24 days of the month were above the 30-year normal. Only the last four days of the month, and the 22nd and 23rd were below normal. The peak deviation (8.5°F) occurred on the 13th, a remarkable deviation for such a large area as Alaska. The monthly mean temperature of all First Order Stations was 47.8°F, 2.2°F above the normal of 45.6°F. This is 2.1°F above the September of 2013 mean of 45.7°F. Homer held the greatest positive deviation from normal for September at a significant 4.6°F above its long-term mean of 48.1°F. Stations following Homer with positive deviations equal to or exceeding 3°F were: St. Paul Island (4.2°F), Kotzebue (3.4°F), King Salmon (3.3°F), Annette (3.3°F) and Kodiak (3.0°F).

The warmest temperature reported for the First Order Stations was 76°F at Fairbanks on the 14th. The coldest temperature was 14°F at Bettles also on the 14th. Barrow reported the lowest September mean temperature at 33.3°F, while Annette reported the highest mean temperature for the month at 57.1°F.

| Station | Temperature | | |
|----------------|------------------|----------------|---------------|
| | Observed (°F) | Normal (°F) | Delta (°F) |
| Anchorage | 49.2 | 48.6 | 0.6 |
| Annette | 57.1 | 53.8 | 3.3 |
| Barrow | 33.3 | 32.1 | 1.2 |
| Bethel | 47.9 | 45.6 | 2.3 |
| Bettles | 41.3 | 40.6 | 0.7 |
| Cold Bay | 50.8 | 48.1 | 2.7 |
| Delta Junction | 44.7 | 43.9 | 0.8 |
| Fairbanks | 46.4 | 44.9 | 1.5 |

| | | | |
|-----------------|-------------|-------------|------------|
| Gulkana | 44.3 | 43.3 | 1.0 |
| Homer | 52.7 | 48.1 | 4.6 |
| Juneau | 51.7 | 50.0 | 1.7 |
| King Salmon | 50.9 | 47.6 | 3.3 |
| Kodiak | 52.4 | 49.4 | 3.0 |
| Kotzebue | 45.7 | 42.3 | 3.4 |
| McGrath | 45.8 | 44.6 | 1.2 |
| Nome | 45.3 | 42.8 | 2.5 |
| St. Paul Island | 49.5 | 45.3 | 4.2 |
| Talkeetna | 48.9 | 47.5 | 1.4 |
| Yakutat | 51.0 | 48.4 | 2.6 |



Daily mean temperature deviation from the normal temperature for the mean of the first order stations for September 2014.

Quite a number of record temperature events were reported for September, and all but one were high events, tracking the general trend for the month and continuing the trend from last month., St. Paul had eleven new, or tied, high temperatures days in September (this follows eleven such events in August), stretching throughout the month from the 3rd to the 26th. In addition, St Paul had seven high minimum events in September (not shown), King Salmon had five high events, and Cold Bay observed two high events, with an additional five high minimum events (not shown). The only new low event occurred in Bettles on the 3rd

| Date | Temperature Records | | | | |
|----------|---------------------|------------------|------------|------------|--------------------|
| | Station | Element | New Record | Old Record | Year of old Record |
| 09/03/14 | Homer | High Temperature | 66 | 66 | 1996 |
| 09/04/14 | Bettles | Low Temperature | 18 | 24 | 1976 |
| 09/04/14 | St. Paul | High Temperature | 57 | 56 | 1979 |

| | | | | | |
|----------|----------------|------------------|----|----|------|
| 09/05/14 | Homer | High Temperature | 77 | 68 | 1994 |
| 09/05/14 | St. Paul | High Temperature | 58 | 55 | 2007 |
| 09/10/14 | King Salmon | High Temperature | 68 | 67 | 2003 |
| 09/11/14 | Cold Bay | High Temperature | 58 | 58 | 2005 |
| 09/11/14 | King Salmon | High Temperature | 67 | 65 | 2010 |
| 09/12/14 | King Salmon | High Temperature | 67 | 66 | 2010 |
| 09/12/14 | Kotzebue | High Temperature | 65 | 61 | 1964 |
| 09/12/14 | Nome | High Temperature | 65 | 65 | 1979 |
| 09/13/14 | Annette | High Temperature | 72 | 72 | 1974 |
| 09/13/14 | Delta Junction | High Temperature | 72 | 71 | 2011 |
| 09/13/14 | Fairbanks | High Temperature | 74 | 74 | 1965 |
| 09/13/14 | St. Paul | High Temperature | 54 | 54 | 2003 |
| 09/14/14 | Annette | High Temperature | 72 | 72 | 2013 |
| 09/14/14 | Delta Junction | High Temperature | 70 | 67 | 2006 |
| 09/14/14 | Fairbanks | High Temperature | 76 | 73 | 1938 |
| 09/14/14 | St. Paul | High Temperature | 56 | 54 | 1997 |
| 09/15/14 | St. Paul | High Temperature | 54 | 54 | 1995 |
| 09/16/14 | St. Paul | High Temperature | 55 | 54 | 1995 |
| 09/19/14 | St. Paul | High Temperature | 54 | 54 | 2004 |
| 09/22/14 | St. Paul | High Temperature | 53 | 53 | 1995 |
| 09/24/14 | Haines Airport | High Temperature | 65 | 62 | 1977 |
| 09/24/14 | St. Paul | High Temperature | 52 | 52 | 1977 |

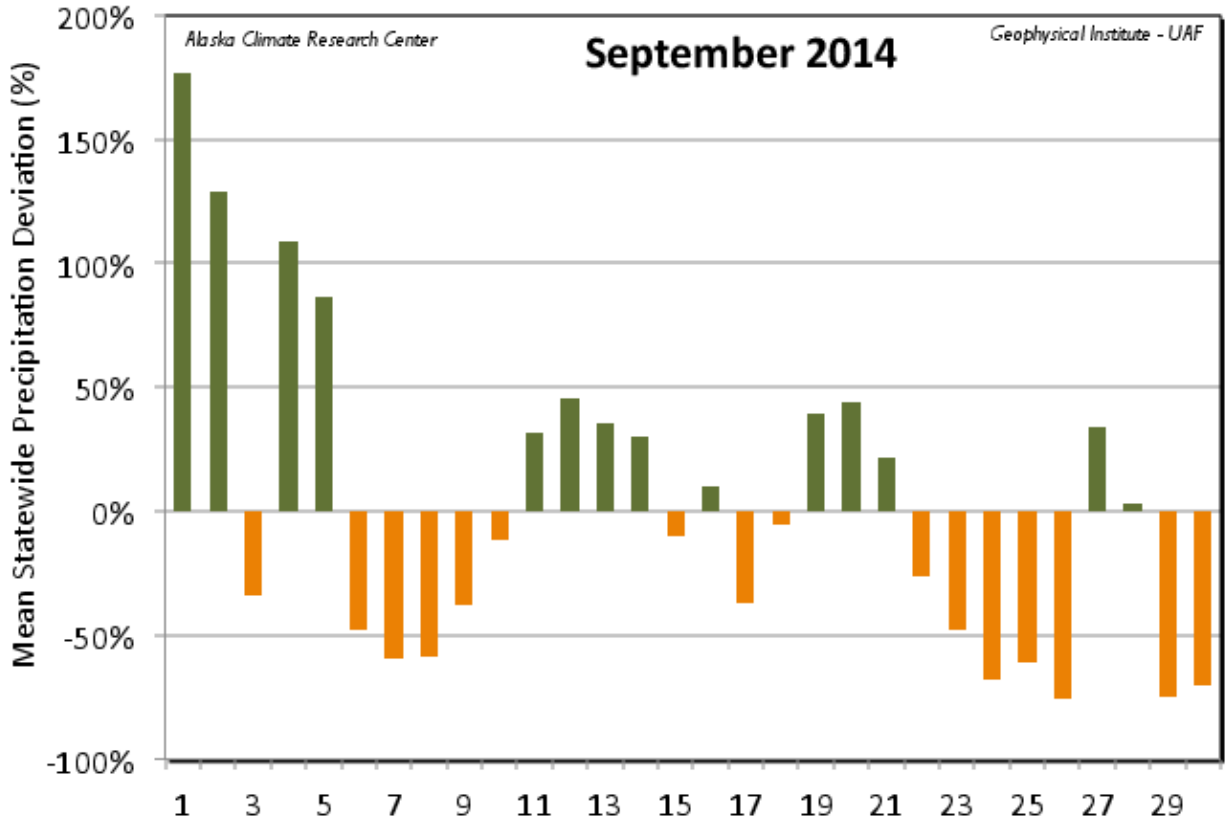
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|----------|-------------|------------------|----|----|------|
| 09/24/14 | St. Paul | High Temperature | 53 | 52 | 1977 |
| 09/25/14 | Kodiak | High Temperature | 60 | 60 | 1989 |
| 09/26/14 | Annette | High Temperature | 69 | 67 | 1965 |
| 09/26/14 | King Salmon | High Temperature | 59 | 57 | 2002 |
| 09/26/14 | St. Paul | High Temperature | 54 | 53 | 1977 |
| 09/28/14 | King Salmon | High Temperature | 59 | 59 | 2003 |

Precipitation

The overall precipitation calculated as the mean of the deviations in percentage of the First Order Stations was just 4% above normal. Eleven of the First Order Stations and 14 days of the month reported above normal values. The greatest daily deviation of 177% occurred on the 1st, a day with heavy precipitation across the central portion of the state. On a monthly basis, Fairbanks had the greatest positive deviation from normal, with a total of 2.89", or 263% of the expected amount of 1.10". Stations following Fairbanks, with values at or above 130% of normal, were Barrow (147%), Anchorage (141%) and Gulkana (130%). Leading the stations with lower than normal precipitation totals were Delta Junction with 34%, and McGrath with 37% of normal.

| Station | Precipitation | | | | |
|----------------|------------------|----------------|---------------|--------------|------|
| | Observed (in) | Normal (in) | Delta (in) | Delta (%) | (%) |
| Anchorage | 4.21 | 2.99 | 1.22 | 41% | 141% |
| Annette | 9.68 | 9.79 | -0.11 | -1% | 99% |
| Barrow | 1.06 | 0.72 | 0.34 | 47% | 147% |
| Bethel | 1.26 | 2.75 | -1.49 | -54% | 46% |
| Bettles | 1.32 | 1.91 | -0.59 | -31% | 69% |
| Cold Bay | 5.47 | 4.73 | 0.74 | 16% | 116% |
| Delta Junction | 0.35 | 1.03 | -0.68 | -66% | 34% |

| | | | | | |
|-----------------|--------------|--------------|--------------|-------------|-------------|
| Fairbanks | 2.89 | 1.10 | 1.79 | 163% | 263% |
| Gulkana | 2.06 | 1.58 | 0.48 | 30% | 130% |
| Homer | 2.49 | 3.31 | -0.82 | -25% | 75% |
| Juneau | 9.31 | 8.64 | 0.67 | 8% | 108% |
| King Salmon | 3.37 | 3.19 | 0.18 | 6% | 106% |
| Kodiak | 7.52 | 7.35 | 0.17 | 2% | 102% |
| Kotzebue | 1.81 | 1.58 | 0.23 | 15% | 115% |
| McGrath | 0.92 | 2.49 | -1.57 | -63% | 37% |
| Nome | 2.58 | 2.45 | 0.13 | 5% | 105% |
| St. Paul Island | 3.57 | 2.99 | 0.58 | 19% | 119% |
| Talkeetna | 3.38 | 4.32 | -0.94 | -22% | 78% |
| Yakutat | 19.83 | 21.11 | -1.28 | -6% | 94% |



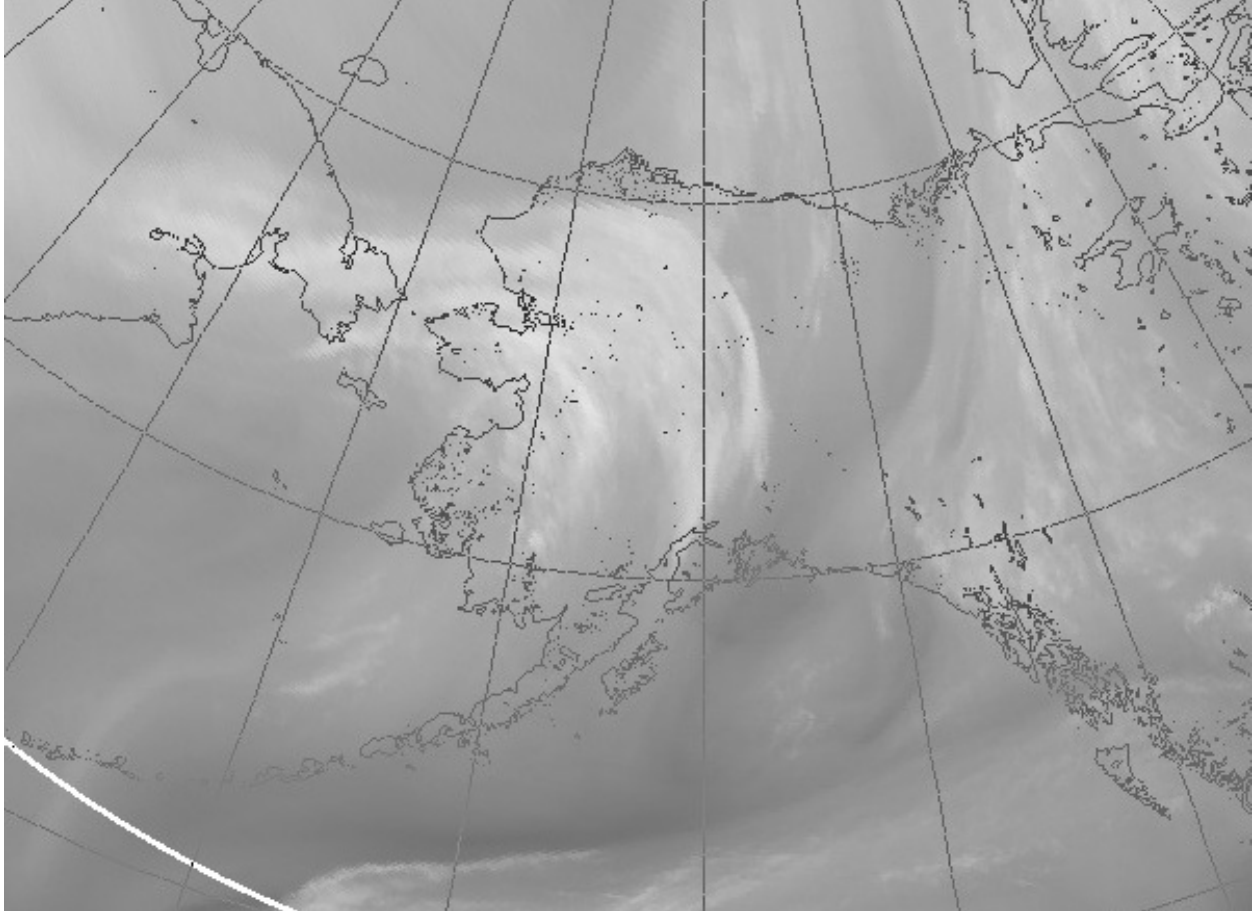
Daily mean precipitation deviation from the normal for the first order stations for September 2014.

The maximum monthly precipitation total reported for the First Order Stations was 19.83" at Yakutat, which also reported the highest daily total of 5.07" on the 5th. The highest one-day snowfall occurred at Barrow on the 2nd with 4.4", and Barrow also reported the highest monthly snowfall of 9.5". Barrow, Bettles and Fairbanks were the only First Order Stations to report any snow this month.

Despite the slightly lower than normal precipitation reported for September for most stations, there were a fair number of daily precipitation records, scattered throughout the month and across the state from Barrow to Annette to St. Paul Island. Barrow also set a snowfall record on the 2nd. On an interesting note, on the first day of the last three months Fairbanks has set a new precipitation record (1.92" on July 1st, 0.89" on August 1st, and 1.43" on September 1st). September ended up as the fourth wettest on record for Fairbanks, with all that rain following the wettest summer on record. Anchorage received twelve days of precipitation from September 9th to the 20th, tying for the fifth longest stretch of rain after 17 days in 1979 as well as 13 days in 1953, 1981, and 1991.

| Date | Precipitation Records | | | | |
|------|-----------------------|---------|------------|------------|--------------------|
| | Station | Element | New Record | Old Record | Year of old Record |
| | | | | | |

| | | | | | |
|----------|-----------------|---------------|------|------|------|
| 09/01/14 | Fairbanks | Precipitation | 1.43 | 0.69 | 1953 |
| 09/02/14 | Barrow | Precipitation | 0.42 | 0.40 | 1996 |
| 09/02/14 | Barrow | Snowfall | 4.40 | 0.80 | 1925 |
| 09/03/14 | Cold Bay | Precipitation | 0.57 | 0.55 | 1996 |
| 09/04/14 | King Salmon | Precipitation | 1.27 | 1.05 | 1929 |
| 09/05/14 | Yakutat | Precipitation | 5.07 | 3.97 | 2005 |
| 09/06/14 | Sitka | Precipitation | 3.47 | 2.21 | 1981 |
| 09/11/14 | Cold Bay | Precipitation | 1.08 | 1.04 | 1990 |
| 09/11/14 | St. Paul | Precipitation | 0.81 | 0.79 | 1954 |
| 09/21/14 | Haines Airport | Precipitation | 2.49 | 2.30 | 1954 |
| 09/21/14 | Skagway Airport | Precipitation | 1.14 | 0.70 | 1994 |
| 09/28/14 | Annette | Precipitation | 2.72 | 2.65 | 1992 |



This water vapor satellite image from the National Weather Service shows weather pattern affecting the Interior portions of Alaska on September 1st, 2014. The storm resulted in heavy rainfall across the region.

Newsworthy Events

Like July and August, the month started off with a record rainfall in Fairbanks on the 1st, and heavy rain across the Western, Interior and Northern parts of the State for the 1st and 2nd, generating yet another round of flood watches for the Interior rivers. Winter storm warnings were also issued for the Northeastern Brooks Range and Denali park area with up to 8" of snow predicted for the Atigun Pass. McKinley Park saw up to five inches. Fairbanks officially dropped below freezing for the first time in the fall on the 4th at 26°F, three days earlier than normal. Also on the 4th heavy rainfall was predicted for the Southcentral area. This heavy rain resulted in the closing of the Copper River highway, and Eyak Lake Road near Cordova, as well as problems along the Richardson Highway east of Valdez.

A fall windstorm knocked out power in the Mendenhall Valley and other areas near Juneau on the 21st. Heavy snow was once again predicted north of Fairbanks with up to six inches for the Atigun Pass on the 23rd. This fell as rain in the Fairbanks area, then froze overnight leading to several accidents being reported the next day.

This information consists of preliminary climatological data compiled by the Alaska Climate Research Center, Geophysical Institute, University of Alaska Fairbanks. For more information on weather and climatology, contact the center at 907-474-7885 or visit the center web site at <http://akclimate.org>. Please report any errors to webmaster@akclimate.org. This summary is based on the 19 first order stations in Alaska operated by the National Weather Service. Extreme events of other stations are also mentioned.