

# ACCESSING CLIMATE DATA THROUGH SCACIS

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Southeast Alaska Drought Workshop

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# scACIS

- ACIS=Applied Climate Information System
- Web interface maintained by Northeast Regional Climate Center (Cornell Univ.)
- Access to historic & real-time basic climate data
- Largely mirrors data archive at NOAA's National Centers for Environmental Information
  - Official US archive
  - Some (for precip minimal) quality control
- <http://scacis.rcc-acis.org/>

**SC ACIS**

# Where is there data for?

- NWS maintained stations
  - WB/NWS offices (Juneau, Yakutat, Annette)
  - CAA/FAA Flight Service Stations (Sitka, Ketchikan)
  - Cooperative: volunteer (Craig, Snettisham)
- Some DoD stations (e.g. early years of Annette)
- CoCoRaHS: post-1998 (very few in Alaska)
- A few automated station networks: post-1980s
  - Alaska Fire Service RAWS
  - NOAA Climate Reference Network
  - NRCS SNOTel

# What climate data?

Daily values of (at most)

- High and Low temperatures
- 24 hour total precip and snowfall
- Snow depth
- Derived values
  - Average temperature
  - Average temperature departure from normal
  - Heating and cooling degree days

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## SC ACIS

Product selection

- Single-Station Products
- Multi-Station Products
- Gridded Data Products
- Other Products

Options selection

Station/Area selection

Go


### Welcome to SC ACIS Version 2

- January 25, 2018: A new tool has been developed to compare the data in the ACIS database to that in GHCN-Daily. This allows users to do things like see the quality flags attached to values in GHCN-Daily that (due to failed quality control) display as missing in ACIS. The tool is available at <http://acis-compare.rcc-acis.org>. In most cases, this tool will be more useful than the Dataset Comparison Tool found under "Other Products".
- January 10, 2018: Annual normals have been added to the Daily/Monthly Normals product.

More ...

← Select a product from the choices to the left.

# scACIS Front Page

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### SC ACIS

Product selection

- Single-Station Products
  - Almanac Data for a Day
  - Time Series for a Day
  - Daily Data for a Month
  - Daily Data Listing
  - Calendar Day Summaries
  - Monthly Summarized Data
- Multi-Station Products
- Gridded Data Products
- Other Products

Options selection


- Seasonal Time Series
- Extremes

Station/Area selection

- Consecutive Days
- First/Last Dates
- Daily/Monthly Normals
- Temperature Graph
- Accumulation Graph
- Multi-Station Graph

Go

# Single Station Products Options

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# SC ACIS

Product selection

- Single-Station Products
- Multi-Station Products**
- Gridded Data Products
- Other Products

Options selection

Station/Area selection

Go


## Welcome to SC ACIS Version 2

- January 25, 2018: A new tool has been developed to compare the data in the ACIS database to that in GHCN-Daily. This allows users to do things like see the quality flags in GHCN-Daily that (due to failed quality control) display as missing data in ACIS. This tool is available at <http://acis-compare.rcc-acis.org>. In most cases, this tool is more useful than the Dataset Comparison Tool found under "Other Products".
- August 18, 2018: Annual normals have been added to the Daily/Monthly Normals

from the choices to the left.

Daily Data  
Monthly Data  
Data for Date Range  
Record Values for a Day  
Multi-Station Extremes  
Precipitation Summary

# Multi-Station Products Options

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**SC ACIS**

Product selection

Options selection

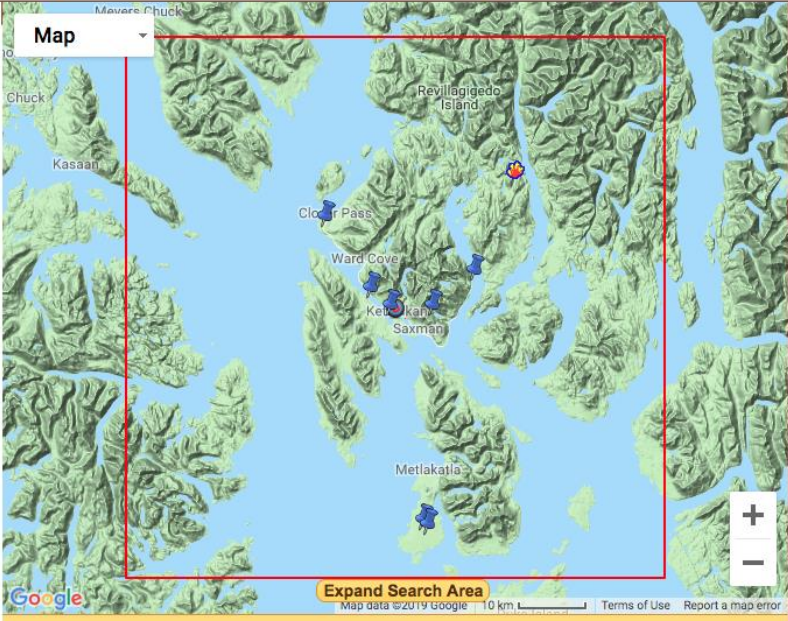
Station/Area selection

ID Search

Ketchikan

Station: KETCHIKAN TONGASS

Go Close map



CDD	Precipitation
0	0.00
0	0.00
0	0.00
0	1.48
0	0.24
0	0.28
0	0.62
0	0.23
0	0.57
0	0.13
0	0.00
0	0.03
0	T
0	0.06
0	1.05
0	1.93
0	0.79
0	0.37
0	0.04
0	T
0	2.99
0	1.47

2019-04-23	47	33	40.0	-3.7	25	0	0.18
2019-04-24	44	33	38.5	-5.4	26	0	0.20
2019-04-25	45	35	40.0	-4.1	25	0	0.42
2019-04-26	46	33	39.5	-4.8	25	0	0.65
2019-04-27	53	32	42.5	-2.0	22	0	0.00
2019-04-28	59	38	48.5	3.8	16	0	0.00
2019-04-29	62	42	52.0	6.9	13	0	0.00
2019-04-30	62	42	52.0	6.9	13	0	0.00
Sum	1510	1134	-	-	620	0	13.73
Average	50.3	37.8	44.1	1.6	-	-	-
Normal	49.4	35.5	42.5	-	676	0	9.38

**Single Station Selection**

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).

Max Temperature : midnight

Min Temperature : midnight

Precipitation : midnight



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# SC ACIS

Product selection

Options selection

Output:  HTML  Text  CSV

Date: 2019-04 Date has the format yyyy-mm

Avg Temperature Handling: **i**


Full precision

Intermediate rounding

Station/Area selection

Go

## Options Selection

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**SC ACIS**

Product selection

- Single-Station Products
- Multi-Station Products
- Gridded Data Products
- Other Products

Options selection

Station/Area selection

Go Restore map

**Example Data**



**Climatological Data for SNETTISHAM POWER PLANT, AK - April 2019**

Click column heading to sort ascending, click again to sort descending.

Date	Max Temperature	Min Temperature	Avg Temperature	HDD	CDD	Precipitation	Snowfall	Snow Depth
2019-04-01	58	30	44.0	21	0	0.00	0.0	24
2019-04-02	60	32	46.0	19	0	0.00	0.0	21
2019-04-03	59	32	45.5	19	0	0.00	0.0	20
2019-04-04	53	33	43.0	22	0	0.15	0.0	18
2019-04-05	41	34	37.5	27	0	0.26	0.0	16
2019-04-06	41	35	38.0	27	0	0.07	0.0	15
2019-04-07	48	35	41.5	23	0	0.11	0.0	14
2019-04-08	48	35	41.5	23	0	0.62	0.0	13
2019-04-09	37	33	35.0	30	0	1.22	0.0	12
2019-04-10	45	34	39.5	25	0	0.26	0.0	11
2019-04-11	49	29	39.0	26	0	0.02	0.0	11
2019-04-12	51	30	40.5	24	0	0.96	0.0	9
2019-04-13	45	33	39.0	26	0	0.48	0.0	8
2019-04-14	53	34	43.5	21	0	0.00	0.0	7
2019-04-15	47	34	40.5	24	0	0.02	0.0	7
2019-04-16	54	35	44.5	20	0	0.07	0.0	6
2019-04-17	49	37	43.0	22	0	0.18	0.0	0
2019-04-18	46	37	41.5	23	0	0.72	0.0	0
2019-04-19	43	35	39.0	26	0	2.99	0.0	0
2019-04-20	42	31	36.5	28	0	0.71	0.2	0
2019-04-21	45	32	38.5	26	0	0.20	0.0	0
2019-04-22	40	36	38.0	27	0	0.72	0.0	0
2019-04-23	44	35	39.5	25	0	0.95	0.0	0
2019-04-24	41	31	36.0	29	0	0.85	1.4	1
2019-04-25	37	30	33.5	31	0	0.48	0.0	0
2019-04-26	39	32	35.5	29	0	0.28	0.0	0
2019-04-27	51	31	41.0	24	0	0.00	0.0	0
2019-04-28	58	30	44.0	21	0	0.00	0.0	0
2019-04-29	59	31	45.0	20	0	0.00	0.0	0
2019-04-30	63	32	47.5	17	0	0.00	0.0	0
<b>Sum</b>	1446	988	-	725	0	12.32	1.6	-
<b>Average</b>	48.2	32.9	40.6	-	-	-	-	7.1
<b>Normal</b>	M	M	M	M	M	8.40	M	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).  
 Observation times may have changed during this period.

Max Temperature : 7am, 6am

Min Temperature : 7am, 6am

**SC ACIS**

Product selection

Options selection

Station/Area selection

ID  Search

Station: EDNA BAY 1.3 E

Go Restore map

# Monthly Data

**Monthly Total Precipitation for EDNA BAY 1.3 E, AK (CoCoRaHS)**

Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2009	M	0.10	2.82	3.89	4.00	3.80	2.64	8.55	14.43	10.96	14.25	5.16	70.60
2010	9.09	3.29	13.90	4.08	2.77	4.97	4.62	4.79	7.62	15.78	12.51	5.75	89.17
2011	11.53	7.36	4.55	5.75	5.21	3.04	5.87	21.45	19.53	16.46	9.39	15.27	125.41
2012	12.94	5.11	4.31	2.07	6.60	5.11	6.10	8.89	18.40	7.88	12.58	10.35	100.34
2013	7.44	14.92	6.13	7.89	5.75	3.57	3.28	5.37	9.52	15.53	15.25	19.37	114.02
2014	11.50	2.58	11.99	11.09	3.47	7.18	7.20	17.60	10.76	15.99	13.31	10.90	123.57
2015	13.10	5.95	8.92	11.26	1.13	5.91	12.47	3.29	18.47	18.87	14.51	8.27	122.15
2016	9.56	9.44	5.00	7.13	10.51	5.38	6.98	6.32	16.61	4.98	13.65	9.34	104.90
2017	7.78	6.66	6.68	3.45	8.07	5.79	8.27	12.77	17.86	10.44	7.44	7.25	102.46
2018	9.16	6.90	3.48	5.99	5.02	3.77	2.31	7.12	5.65	10.06	15.07	11.61	86.14
2019	15.07	2.93	2.86	8.61	0.48	M	M	M	M	M	M	M	29.95
<b>Mean</b>	10.72	5.93	6.42	6.47	4.82	4.85	5.97	9.62	13.89	12.70	12.80	10.33	97.16
<b>Max</b>	15.07 2019	14.92 2013	13.90 2010	11.26 2015	10.51 2016	7.18 2014	12.47 2015	21.45 2011	19.53 2011	18.87 2015	15.25 2013	19.37 2013	125.41 2011
<b>Min</b>	7.44 2013	0.10 2009	2.82 2009	2.07 2012	0.48 2019	3.04 2011	2.31 2018	3.29 2015	5.65 2018	4.98 2016	7.44 2017	5.16 2009	29.95 2019

## SC ACIS

### Product selection

### Options selection

Output:  Table  
 List  
 CSV-Table  
 CSV-List

Year range: por - 2019

#### Additional options

Month range: 1 - 12

Set maximum missing values  
 Include date of occurrence  
 Include missing days count  
 Select years

### Station/Area selection

Go Restore map

### Monthly Total Precipitation for EDNA BAY 1.3 E, AK (CoCoRaHS)

Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2009	M	0.10	2.82	3.89	4.00	3.80	2.64	8.55	14.43	10.96	14.25	5.16	70.60
2010	9.09	3.29	13.90	4.08	2.77	4.97	4.62	4.79	7.62	15.78	12.51	5.75	89.17
2011	11.53	7.36	4.55	5.75	5.21	3.04	5.87	21.45	19.53	16.46	9.39	15.27	125.41
2012	12.94	5.11	4.31	2.07	6.60	5.11	6.10	8.89	18.40	7.88	12.58	10.35	100.34
2013	7.44	14.92	6.13	7.89	5.75	3.57	3.28	5.37	9.52	15.53	15.25	19.37	114.02
2014	11.50	2.58	11.99	11.09	3.47	7.18	7.20	17.60	10.76	15.99	13.31	10.90	123.57
2015	13.10	5.95	8.92	11.26	1.13	5.91	12.47	3.29	18.47	18.87	14.51	8.27	122.15
2016	9.56	9.44	5.00	7.13	10.51	5.38	6.98	6.32	16.61	4.98	13.65	9.34	104.90
2017	7.78	6.66	6.68	3.45	8.07	5.79	8.27	12.77	17.86	10.44	7.44	7.25	102.46
2018	9.16	6.90	3.48	5.99	5.02	3.77	2.31	7.12	5.65	10.06	15.07	11.61	86.14
2019	15.07	2.93	2.86	8.61	0.48	M	M	M	M	M	M	M	29.95
<b>Mean</b>	10.72	5.93	6.42	6.47	4.82	4.85	5.97	9.62	13.89	12.70	12.80	10.33	97.16
<b>Max</b>	15.07	14.92	13.90	11.26	10.51	7.18	12.47	21.45	19.53	18.87	15.25	19.37	125.41
	2019	2013	2010	2015	2016	2014	2015	2011	2011	2015	2013	2013	2011
<b>Min</b>	7.44	0.10	2.82	2.07	0.48	3.04	2.31	3.29	5.65	4.98	7.44	5.16	29.95
	2013	2009	2009	2012	2019	2011	2018	2015	2018	2016	2017	2009	2019

# Output Options

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### SC ACIS

- Product selection
- Options selection
- Station/Area selection
  - ID Search
  - Juneau
  - Station: SNETTISHAM POWER PLANT
  - Go Restore map

#### Accumulated Precipitation – SNETTISHAM POWER PLANT, AK

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values

**Accumulated Precip with normal**

**Print/download options**

2018-19 accumulation — Normal

Powered by ACIS

Click to Plot/Remove Years of Interest (number of missing days in parentheses) Resort table by year

1963-64: - (219)	1972-73: - (218)	1979-80: - (219)	1986-87: - (218)	1993-94: - (218)	2000-01: - (218)	2017-18: 91.92	2015-16: 120.80 (2)
1966-67: - (218)	1973-74: - (218)	1980-81: - (218)	1987-88: - (219)	1994-95: - (218)	2001-02: - (218)	2016-17: 96.75 (3)	2014-15: 121.94
1967-68: - (219)	1974-75: - (218)	1981-82: - (218)	1988-89: - (218)	1995-96: - (219)	2002-03: - (218)	2004-05: 97.44 (80)	2007-08: 123.02 (2)
1968-69: - (218)	1975-76: - (219)	1982-83: - (218)	1989-90: - (218)	1996-97: - (218)	2003-04: - (219)	2018-19: 99.78 (1)	2006-07: 123.76
1969-70: - (218)	1976-77: - (218)	1983-84: - (219)	1990-91: - (218)	1997-98: - (218)	1964-65: 21.67 (187)	2010-11: 106.50 (10)	2013-14: 125.61 (2)
1970-71: - (218)	1977-78: - (218)	1984-85: - (218)	1991-92: - (219)	1998-99: - (218)	1965-66: 23.29 (193)	2012-13: 115.26	2008-09: 135.12
1971-72: - (219)	1978-79: - (218)	1985-86: - (218)	1992-93: - (218)	1999-00: - (219)	2009-10: 90.79	2005-06: 119.75 (2)	2011-12: 139.53

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**SC ACIS**

Product selection

Options selection

Station/Area selection

ID

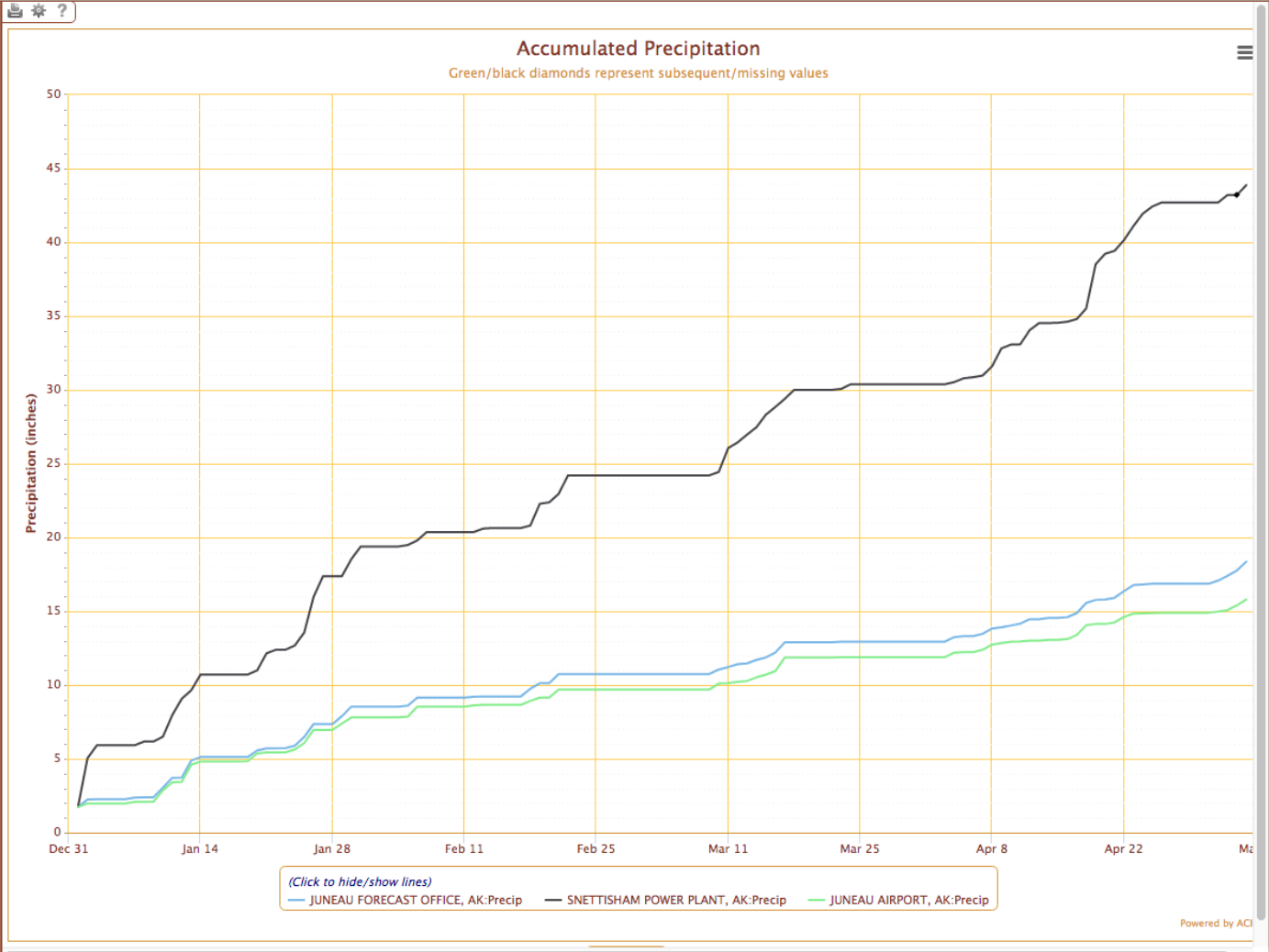
Station:

Add more stations to the graph by selecting additional stations here and clicking the 'Add to graph' button below.

Add to graph

Restore map

# Graphing Tool



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### SC ACIS

- Product selection
- Options selection
- Station/Area selection
  - State/Area Bounding Box
  - State: Alaska
  - CWA County: Ketchikan Gateway Boror
  - Division
  - Basin
  - County

Go Close map

Map

Map data ©2019 Google, INEGI 1000 km Terms of Use

## Multi-Station Selection

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### SC ACIS

Product selection

Options selection

Output:  HTML  CSV  Map

Date: 2018-12

Variable: Precipitation Summary: Sum

Add another variable

Additional options

- Set maximum missing values
- Include date of occurrence
- Include missing days count
- Include station type
- Include station coordinates
- Include county
- Include climate division

Station/Area selection

Go Restore map

### Monthly Data for December 2018 for Juneau AK NWS CWA

Each variable column contains summary value and number of missing days.  
Click column heading to sort ascending, click again to sort descending.

State	Name	Station Type	Total Precipitation	Miss
AK	ANNETTE WSO AP	WBAN	6.41	11
AK	ANNEX CREEK	WBAN	8.09	0
AK	AUKE BAY	COOP	3.65	0
AK	CRAIG	WBAN	14.58	0
AK	EAGLECREST BASE	COOP	9.04	0
AK	EDNA BAY 1.3 E	CoCoRaHS	11.61	3
AK	GUSTAVUS	WBAN	5.33	0
AK	GUSTAVUS 2 NE	WBAN	4.79	0
AK	HAINES #2	COOP	7.52	0
AK	HAINES AP	WBAN	6.76	0
AK	HIDDEN FALLS HATCHERY	COOP	28.12	0
AK	HOONAH	COOP	6.00	0
AK	HYDER	COOP	6.33	0
AK	JUNEAU 14.6 W	CoCoRaHS	5.81	1
AK	JUNEAU AIRPORT	WBAN	5.63	0
AK	JUNEAU DOWNTOWN	WBAN	7.46	0
AK	JUNEAU FORECAST OFFICE	COOP	5.77	0
AK	JUNEAU LENA POINT	COOP	3.83	0
AK	JUNEAU-DOUGLAS WWTP	COOP	6.72	0
AK	KETCHIKAN 10N	COOP	12.56	0
AK	KETCHIKAN INTL AP	WBAN	9.97	3
AK	KLAWOCK AP	WBAN	11.44	0
AK	LITTLE PORT WALTER	WBAN	24.73	0
AK	LONG LAKE	Snotel	15.00	0
AK	METLAKATLA 6 S	WBAN	13.67	0
AK	MOORE CREEK BRIDGE	Snotel	3.10	0
AK	PELICAN	COOP	14.40	0
AK	PETERSBURG 1	WBAN	10.98	0
AK	PETERSBURG 4.4 NW	CoCoRaHS	5.31	17
AK	PT BAKER	COOP	5.39	0
AK	SITKA 1 NE	WBAN	10.51	0
AK	SITKA AIRPORT	WBAN	7.86	0
AK	SKAGWAY	COOP	4.92	0
AK	SKAGWAY 0.5 W	CoCoRaHS	0.39	23
AK	SKAGWAY AIRPORT	COOP	3.83	0
AK	SKAGWAY AIRPORT	WBAN	0.56	17
AK	SNETTISHAM POWER PLANT	COOP	13.78	0

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NO AA Regional Climate Centers

**Mutli-Station  
with options**