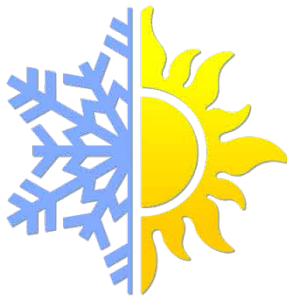


Stakeholder Feedback: Web-based Tool to Provide Likelihoods of Weather Conditions for Outdoor Activities



ACCAP
Alaska Center for
Climate Assessment & Policy



April 9, 2009



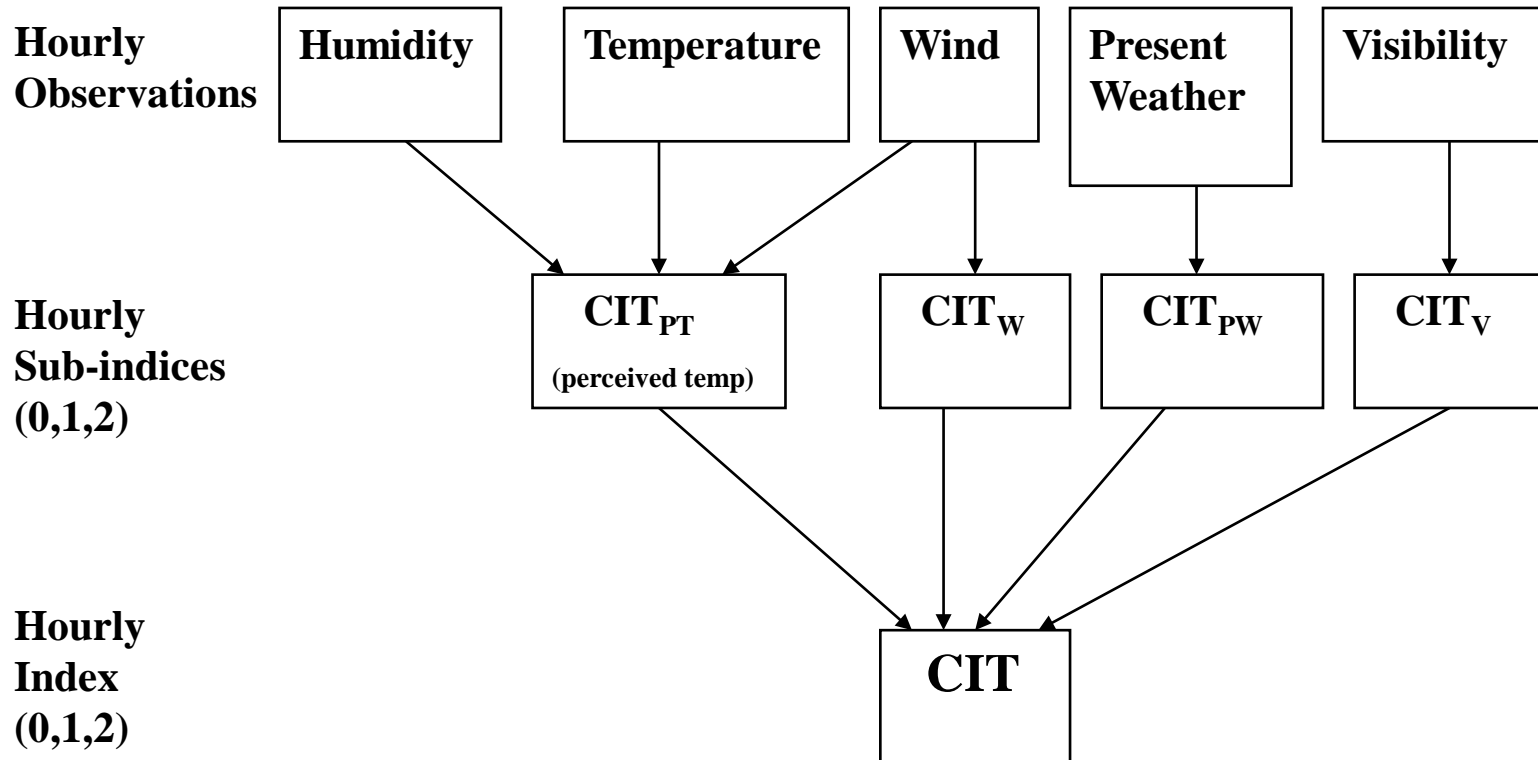
Potential Phases of Hourly Weather Data Web-Tool



- Historical station observations
- Downscaled reanalysis data
- Projections of future conditions

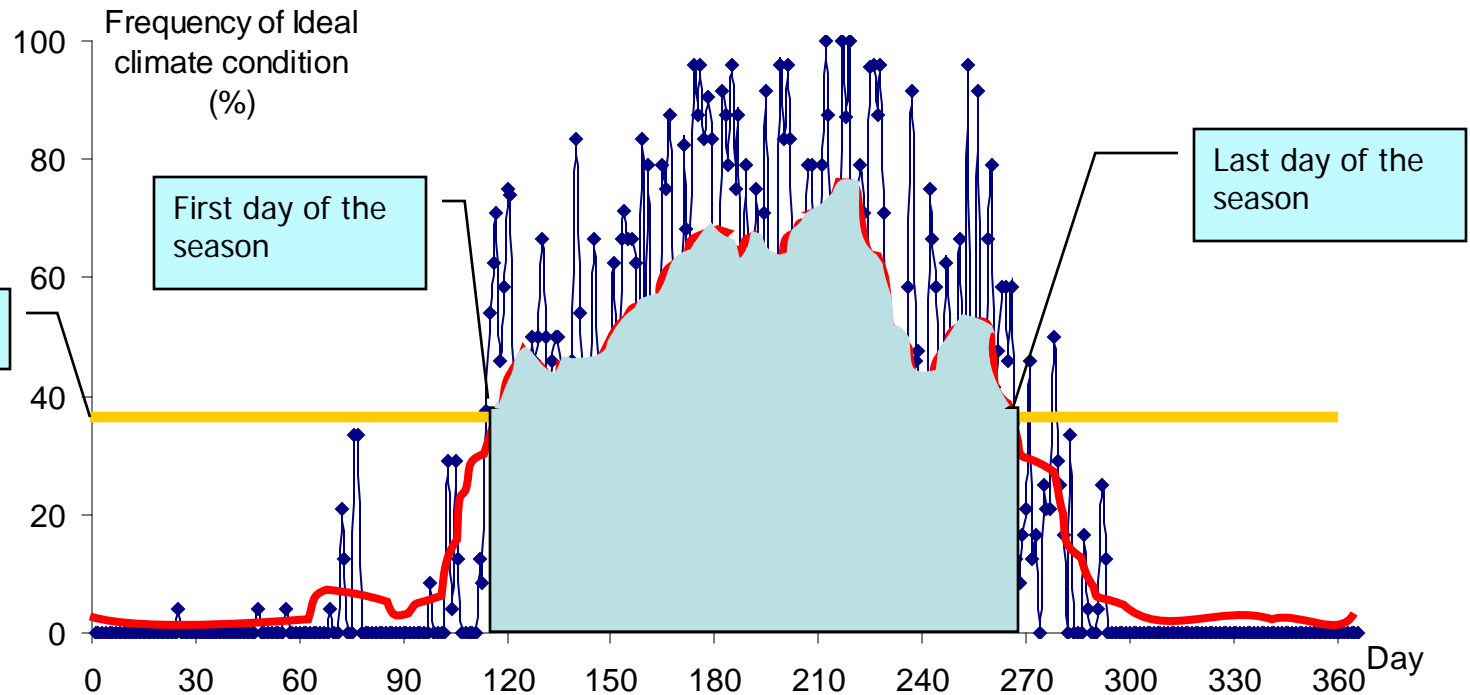
Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>

Example of the use of hourly weather data: Climate Index for Tourism (CIT)



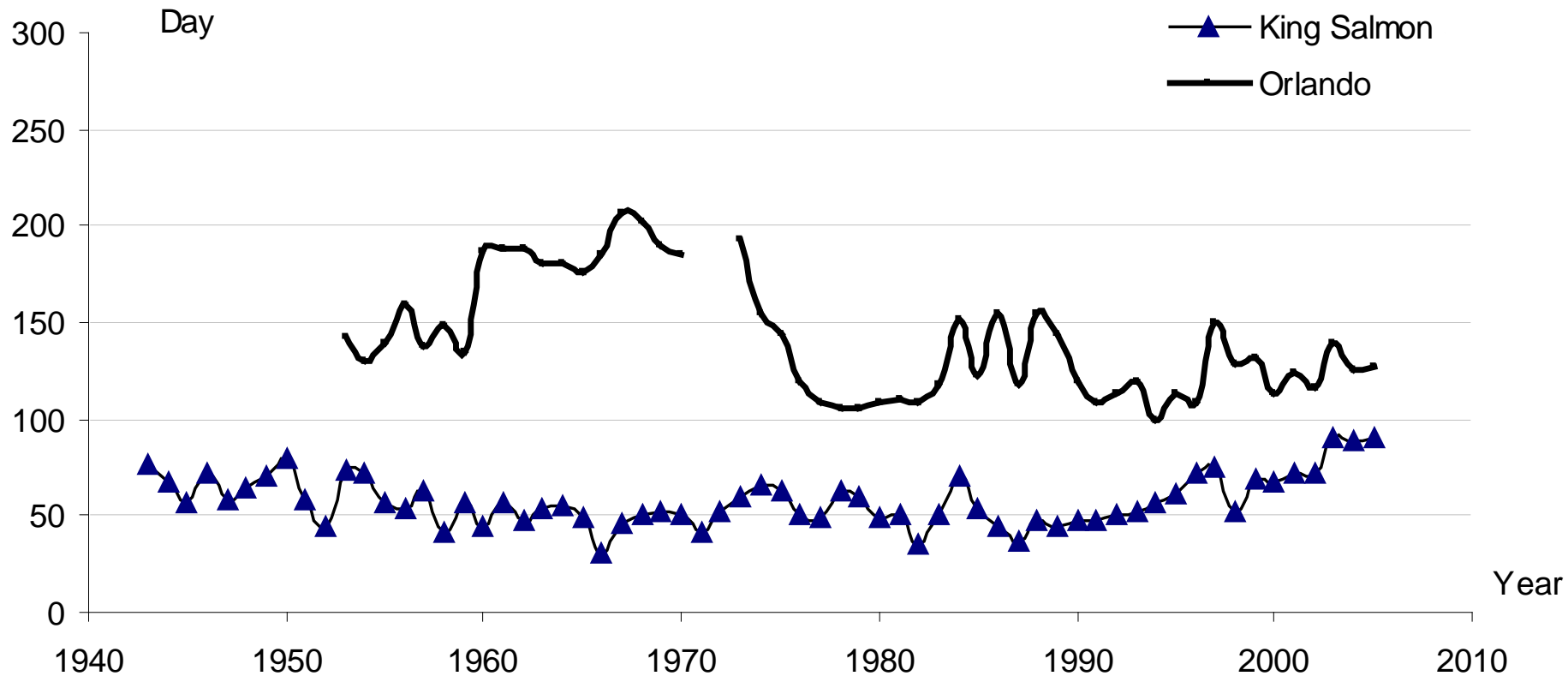
Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>

Can use hourly data to quantify sightseeing season length at daily resolution



Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>

Number of days each year with at least six consecutive hours of ideal sightseeing conditions



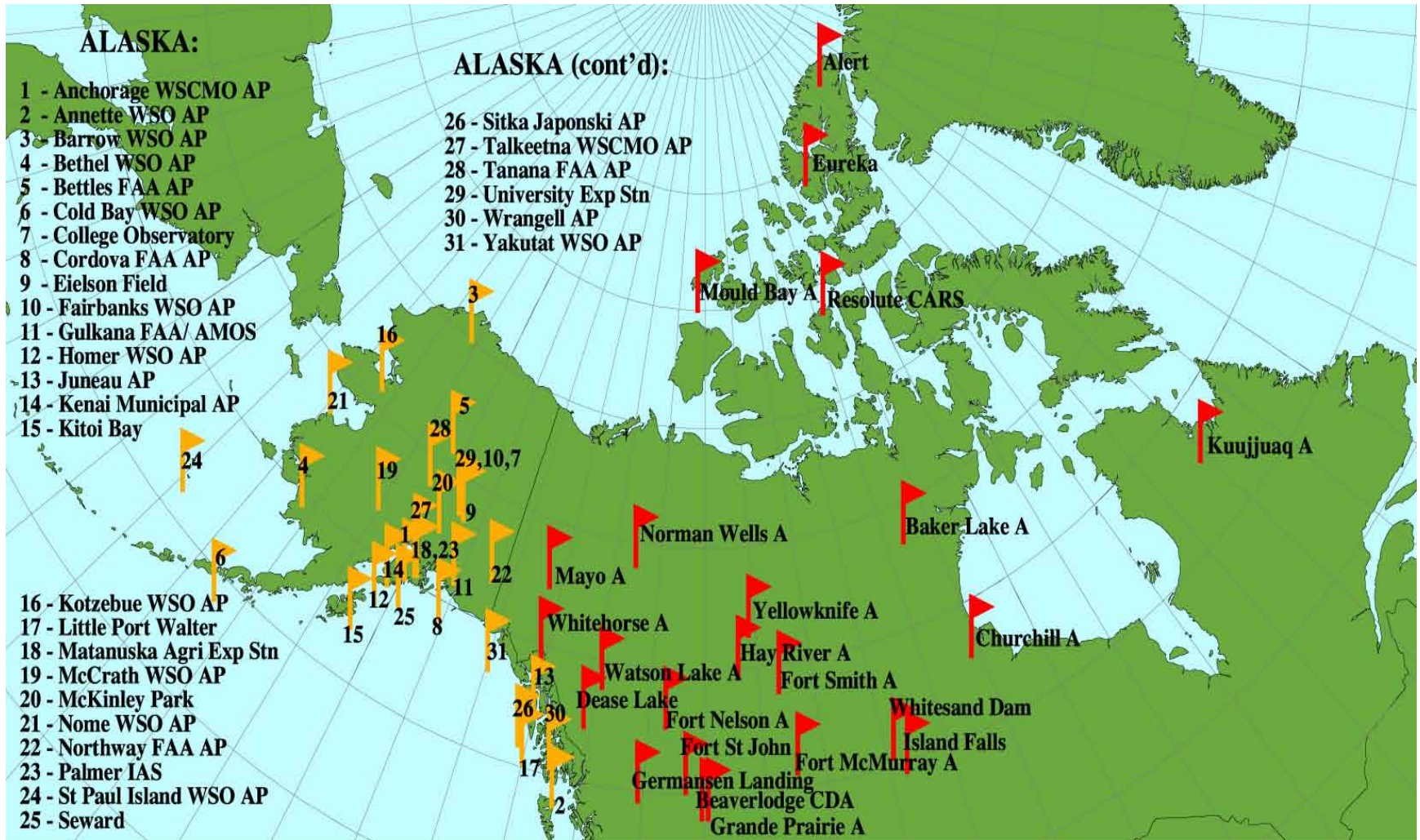
Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>

Three phases of proposed activity

- **Historical data from Alaskan weather stations**
- **Historical data, entire state at high resolution**
- **Future projections (by decade)**

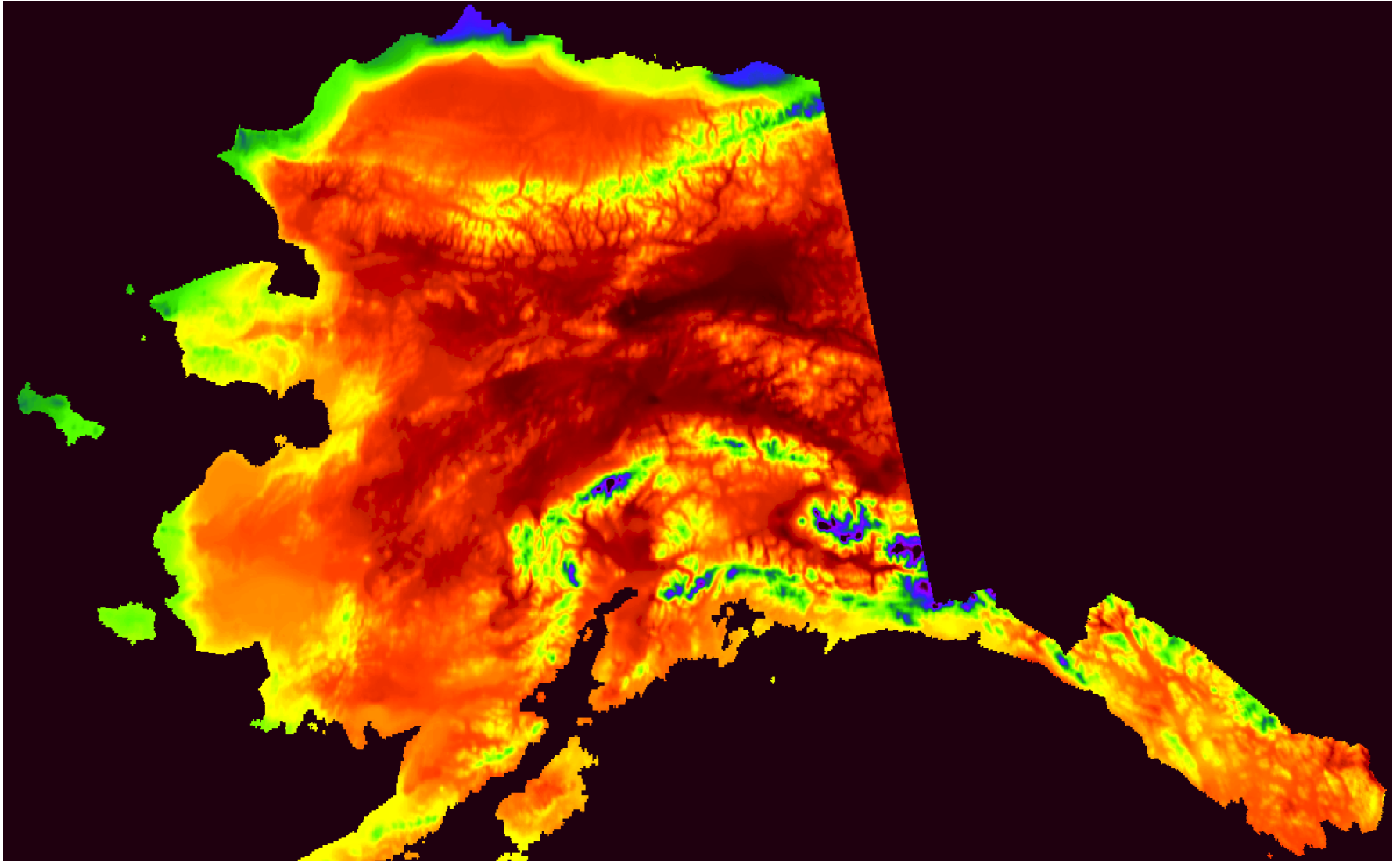
Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>

Long-record stations for training of downscaling algorithms



Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>

PRISM July T_{\max} (1961-1990)
(deep red = 70s F, blue = 40s F)



Sample of projections (A1B scenario): Fort Yukon temperatures by decade

FORT-YUKON

66.5647 66.5681 214.7261 214.7170 0.520 KM

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

1961-1990	-20.3 (0.0)	-15.0 (0.0)	0.6 (0.0)	21.5 (0.0)	45.0 (0.0)	60.3 (0.0)	63.2 (0.0)	56.5 (0.0)	41.3 (0.0)	19.0 (0.0)	-7.3 (0.0)	-18.0 (0.0)
1991-2000	-17.9 (3.5)	-13.7 (1.2)	4.9 (2.1)	23.6 (3.3)	46.2 (1.4)	61.1 (1.3)	63.8 (0.7)	58.1 (0.4)	42.1 (1.1)	19.8 (0.9)	-5.2 (1.8)	-16.6 (2.8)
2001-2010	-16.4 (3.2)	-11.2 (3.7)	4.0 (1.6)	24.5 (2.1)	47.3 (1.9)	60.7 (1.3)	64.8 (1.7)	58.2 (1.0)	42.3 (1.0)	21.0 (1.7)	-4.2 (1.5)	-16.8 (2.3)
2011-2020	-16.0 (3.3)	-11.6 (2.3)	3.8 (4.0)	24.1 (2.1)	46.6 (0.9)	62.1 (1.3)	63.3 (1.5)	58.0 (1.1)	43.1 (1.0)	20.3 (2.1)	-4.6 (1.3)	-15.4 (2.0)
2021-2030	-12.9 (5.4)	-7.2 (3.6)	6.0 (2.3)	25.0 (3.2)	46.8 (0.6)	61.7 (1.5)	63.8 (1.7)	58.7 (1.8)	42.5 (1.1)	21.7 (2.4)	-3.9 (1.8)	-13.4 (2.9)
2031-2040	-13.3 (1.5)	-9.2 (4.5)	5.8 (4.1)	25.9 (2.6)	47.5 (1.5)	62.3 (1.3)	65.1 (2.5)	59.3 (2.0)	43.4 (1.4)	23.5 (2.4)	-0.1 (1.7)	-12.9 (2.4)
2041-2050	-10.9 (3.5)	-6.8 (3.7)	11.1 (3.2)	25.6 (3.0)	48.8 (2.1)	63.0 (1.9)	66.0 (1.7)	60.1 (1.5)	45.5 (2.1)	26.0 (2.0)	2.3 (1.5)	-9.3 (2.8)
2051-2060	-10.9 (4.3)	-4.5 (6.4)	7.5 (2.4)	27.2 (3.2)	48.4 (0.8)	63.8 (1.8)	66.5 (1.7)	60.5 (2.0)	45.1 (1.7)	25.4 (1.4)	1.8 (1.0)	-7.1 (2.1)
2061-2070	-6.8 (2.0)	-3.8 (3.6)	10.4 (4.2)	29.3 (3.1)	50.9 (2.5)	64.4 (3.4)	67.3 (3.1)	61.5 (2.3)	46.2 (2.4)	27.3 (2.1)	5.2 (3.1)	-6.0 (4.6)
2071-2080	- 6.4 (1.9)	-3.4 (3.9)	10.8 (2.0)	29.3 (3.8)	51.3 (3.0)	64.3 (3.6)	67.7 (3.2)	62.7 (2.4)	46.9 (1.7)	27.8 (2.7)	5.3 (3.7)	-4.3 (3.9)
2081-2090	-3.8 (1.6)	-0.6 (3.3)	11.4 (3.6)	30.4 (3.6)	51.5 (2.3)	65.4 (3.5)	68.3 (2.2)	63.2 (2.6)	46.8 (1.7)	29.0 (1.2)	7.2 (2.6)	-2.7 (3.8)
2091-2100	-5.0 (2.9)	-1.6 (3.7)	13.4 (3.1)	31.5 (3.5)	52.7 (2.3)	65.2 (3.5)	69.0 (4.4)	63.4 (3.4)	48.4 (2.1)	28.9 (2.4)	7.1 (2.2)	-0.1 (3.0)

Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>



Which variables interest you most?



- Hourly observations
 - Temperature
 - Wind speed
 - Wind direction
 - Visibility
 - Present weather (rain/intensity, snow/intensity, fog, drizzle, thunder, smoke, etc.)
 - Dewpoint
 - Relative humidity
 - Heat index
 - Wind chill

Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>



Which variables interest you most?



- Daily totals
 - Precipitation
 - Evapotranspiration
 - Snow depth
 - Snow water equivalent
 - Solar radiation (daily total or average)

Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>



Are these parameters important to you?



Ability to:

- Select a range for each variable
 - Such as temperatures between 45F and 80F?
- Select a threshold for variable values
 - Such as precipitation less than 1 in.?
- Specify weather variables for certain times of day
 - For example between 10am and 2pm?

Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>



Are you interested in trends over time?



- Trends in variables over time
 - For example to see if temperature at noon has changed in the past 30 years?
- What time periods are most useful for you?
 - For example: hour, date (day of year), week, or calendar month

Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>



Do you prefer metric or English units?



- Celsius
- Centimeters/meters
- Kilometers
- Fahrenheit
- Inches/feet
- Miles

Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>



THANK YOU !



- For more information contact:
- Dr. John Walsh
 - jwalsh@iarc.uaf.edu
- Dr. Sarah Trainor
 - sarah.trainor@alaska.edu, 907-474-7878
- Brook Gamble
 - accap@uaf.edu, 907-474-7812

Please fill out our survey at: <http://www.uaf.edu/accap/index.htm>