THE STATE CLIMATOLOGIST

VOLUME 9 NUMBER 3 JULY 1985
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IN COOPERATION WITH THE AMERICAN ASSOCIATION OF STATE CLIMATOLOGISTS

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
NATIONAL CLIMATIC DATA CENTER

COVER PHOTO . Cloud to cloud and cloud to air lightning over The Great Smoky Mountains National Park. Photo by G. W. Goodge.

New Ice Atlas Publication. A limited first printing of Sea Ice Climatic Atlas: Volume I, Antarctic, has been completed by the National Climatic Data Center. The atlas contains data digitized from weekly ice analysis charts for the period 1973-1982. The data were composited over a semimonthly period centered on the first and fifteenth of each month, and are presented as shaded maps. The composite classifications are:

1. Maximum, Mean, and Minimum Ice Edges
2. Probability of Occurrence of Any Ice
3. Mean Ice Concentration
4. Mean Ice Concentration When Ice is Present
5. Maximum, Mean, and Minimum Extent of 5/10ths or More of Ice.

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Cooling Degree Days. NCDC has updated and reformatted the Historical Climatology Series 5-2, "State, Regional, and National Monthly and Seasonal Cooling Degree Days Weighted by Population (1980 Census), January 1931 -December 1984," with the inclusion of data for the calendar years 1983 and 1984. This publication contains population-weighted cooling degree day data by year based on state division averages. It also gives the long-term mean and standard deviations for the individual months and annual total, and a rank value which gives the relative standing of the annual degree day value in the long-term record. Also included are 30-year averages based on data for the 1951 - 80 period. The base temperature for the calculated values is 65 degrees Fahrenheit.

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NCDC has recently received several requests for the old (Form 1066) Annual Climatological Summary. The form (see sample on next page) was never printed as a regular publication, rather it was a computer printout as part of the quality control for the Climatological Data Annual. However, with the institution of the new CD processing system in 1982, computer printouts (of the Form 1066) were terminated. In light of the continuing demand for these forms, we have written the programs necessary to produce these forms on microfiche. The forms are done for both First Order and CO-OP stations and are organized on the microfiche in station alphabetical order by division by state. About half of the states require only one microfiche per year with the remainder of the states requiring two microfiche. There are a total of 79 fiche for all fifty states.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

ANNUAL CLIMATOLOGICAL SUMMARY

NATIONAL CLIMATIC DATA CENTER
FEDERAL BUILDING
ASHEVILLE, NORTH CAROLINA
28801

STATION IDENTIFICATION

26016779 RENO WSFO AP NEVADA ELEVATION 4404 FT. ABOVE SEA LEVEL LAT. 39 30N LONG. 119 47W

DATE		TEMPERATURE (°F)														PRECIPITATION (INCHES)									
												NUMBER OF DAYS								SNOW, SLEET			NO. OF DAYS		
YR.	MO.	MEAN MAXIMUM	MEAN MINIMUM	MEAN	DEPART. FROM NORMAL	HEATING DEGREE DAYS	COOLING DEGREE DAYS	HIGHEST	DATE	LOWEST	DATE	MAX ≥ 90°	MAX ≤ 32°	MIN ≤ 32°	MIN ≤ 0°	TOTAL	DEPART. FROM NORMAL	GREATEST OBSERVED DAY	DATE	TOTAL FALL	MAX DEPTH	DATE	≥.10	≥.50	≥1.0
84	1	40.9	22.9	31.9	-.3	1019	0	58	25	1	17	0	4	31	0	.36	-.88	.15	16	6.7	6	16	2	0	0
84	2	51.2	23.2	37.2	-.2	801	0	61	12+	17	22	0	0	28	0	.22	-.73	.12	15	1.5	1	14	1	0	0
84	3	59.0	29.5	44.3	3.7	637	0	71	20	21	5+	0	0	22	0	.20	-.54	.15	13	.1	0T	31+	1	0	0
84	4	59.6	31.9	45.8	-.6	570	0	78	15+	20	9	0	0	16	0	.24	-.22	.16	5	.0T	0T	30+	1	0	0
84	5	76.1	42.7	59.4	4.8	183	16	94	29	29	6	2	0	2	0	.06	-.68	.06	15	.0	0		0	0	0
84	6	79.4	43.9	61.7	-.7	133	42	95	28+	35	9	5	0	0	0	.34	.00	.13	14	.0	0		1	0	0
84	7	92.4	54.3	73.4	3.9	0	264	101	4	47	22+	23	0	0	0	.45	.15	.45	23	.0	0		1	0	0
84	8	88.8	50.7	69.8	2.9	8	162	98	9	43	31	13	0	0	0	.02	-.25	.02	25	.0	0		0	0	0
84	9	82.1	44.0	63.1	2.9	111	61	94	9	32	25	5	0	1	0	.04	-.26	.03	19	.0	0		0	0	0
84	10	60.1	32.3	46.2	-4.1	575	0	80	7	22	18	0	0	15	0	.60	.26	.39	16	3.4	3	17	1	0	0
84	11	49.9	29.2	39.6	-.1	753	0	70	1	14	26	0	0	22	0	1.68	1.08	.64	27	3.0	3	25	6	1	0
84	12	42.4	19.0	30.7	-1.8	1056	0	51	11+	7	20	0	3	31	0	.07	-1.14	.04	15	1.3	1	16	0	0	0
	ANN.	65.2	35.3	50.3	.9	5846	545	101	JUL	1	JAN	48	7	168	0	4.28	-3.21	.64	NOV	16.0	6	JAN	14	1	0

M MISSING DATA. APPEARS WITH MONTHLY DATA WHEN LESS THAN 10 DAYS ARE MISSING, AND IT APPEARS ALONE IF 10 OR MORE DAYS ARE MISSING. IT APPEARS WITH ANNUAL DATA, WHEN DERIVED FROM MONTHS WITH MISSING DATA.

* OCCURRED ON ONE OR MORE PREVIOUS DATES DURING THE MONTH.

T TRACE

V INCLUDES TOTAL FOR PREVIOUS MONTH.

B ADJUSTED MONTHLY OR ANNUAL VALUE TOTAL CONTAINS ESTIMATED VALUE(S) FOR MISSING DATA.

A AMOUNT PRECIPITATION MAY INCLUDE PRECIPITATION THAT OCCURRED DURING THE PREVIOUS MONTHS.

NEWS FROM THE STATES

NORTH CAROLINA

The North Carolina State Climatologist office has published a brochure entitled THE NORTH CAROLINA CLIMATE PROGRAM. The brochure briefly describes some of the climatic variables and extremes of North Carolin climate and how the data may be used by various clients.

COLORADO

The Colorado Climate Center (CCC) has produced a 42" X 52" color map of the mean annual rainfall for the State of Colorado. The isohyets are based on the 1951-80 period. The CCC has provided NCDC with a limited supply of these maps. Anyone wishing to have a copy may do so by writing Grant W. Goodge, NCDC, Federal Building, Asheville, NC 28801.

SUMMARY OF HOURLY OBSERVATIONS

The National Climatic Data Center's Statistical Climatology Branch is developing plans to publish a reissue of Climatography of the United States No. 82, "Summary of Hourly Observations." The summaries will be for the 1975-1984 period and will be generated from hourly, not three-hourly, data from the National Weather Service first-order observation sites. Recognizing that user requirements have changed in the 20 years since publication of the 1951-1960 summaries, we want to incorporate as many of these new requirements into the new summary as economically feasible. Our current plan is to print the high demand requirements in the summary in a condensed form with much more detailed summaries and statistics available on microfiche and/or magnetic tape.

Recognizing that we are not the final word on user requirements, we solicit your ideas on the needs. Please write, or call, Dr. W. J. Koss with your ideas by September 1, 1985; your ideas can help make this new summary a truly useful publication. It would be most helpful if you could send a sample format or an example from an existing summary. For your convenience, we have included several sample pages from the old summary. You can contact Dr. Koss at:

Dr. Walter James Koss
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National Climatic Data Center
Federal Building
Asheville, NC 28801-2696
Telephone: (704) 259-0319

U. S. DEPARTMENT OF COMMERCE
LUTHER H. HODGES, Secretary
WEATHER BUREAU
F. W. REICHELDERFER, Chief

CLIMATOGRAPHY OF THE UNITED STATES NO. 82 – 26

DECENNIAL CENSUS OF UNITED STATES CLIMATE–

SUMMARY OF HOURLY OBSERVATIONS

120th Meridian Time Zone

RENO, NEVADA

Municipal Airport

1956 - 1960

Washington, D.C.: 1963
Reprinted September 1976

PREFACE AND EXPLANATION OF TABLES

This summary of surface weather data is one of a series prepared under the Decennial Census of United States Climate, 1960 program. Similar summaries are being published for most Weather Bureau stations. All data are based on monthly data published in Local Climatological Data Supplements for all or part of the period 1951 - 1960. Where the full 10-year period is not covered by the monthly data, summaries are based on the period 1956 - 1960.

This series supersedes the series entitled "Climatography of the United States No. 30-Summary of Hourly Observations", which was published in 1956. It differs from this earlier information in that a longer, more representative period is used for summarization wherever possible. Comparability between stations is improved in the Decennial Census series by the use of identical 10-year and 5-year periods.

The tables in this pamphlet are similar to Tables A through E in the monthly Local Climatological Data Supplements except that Tables B, D, and E give percentage frequencies instead of total occurrences. In these tables all hourly observations are represented unless otherwise specified. The total number of observations used is indicated on each page under the month name. In the percentage tables "+" indicates more than 0 but less than 0.5 in Table E and 0.05 in Tables B and D. Values are not adjusted to make their sums exactly equal to column or row totals.

STATION LOCATION

RENO, NEVADA
MUNICIPAL AIRPORT

Location	Occupied from	Occupied to	Airline distance and direction from previous location	Latitude	Longitude	Elevation above (feet)									Remarks
						Sea level		Ground							
						Ground	Actual barometer elevation (H_L)	Wind instruments	Extreme thermometers	Psychrometer	Telepsychrometer	Tipping bucket rain gage	Weighing rain gage	8" rain gage	Hygrothermometer	
C A A BLDG, RENO MUNICIPAL AIRPORT	6/ 1/49	10/23/59	60 FT S	39°29.6'N	119°46.6'W	4397	4402	53	6	6		4	5a	3a			Name changed from United Airlines AP 12/1/53. (a) Shielded 10/25/57.
WEATHER BUREAU BUILDING MUNICIPAL AIRPORT	10/23/59	PRESENT	0.8 MI NNW	39°30.0'N	119°46.6'W	4404	4408	20	6	6			5	4	4		Moved to new building, wind equip. installed in field location. Hygrothermometer put in operation in field location 2/1/60.

LOCATION AND TOPOGRAPHY:

Reno Municipal Airport is located 2-1/4 miles south-southeast of the center of Reno, on the western side of the Truckee Meadows. To the west the Sierra Nevada Mountains rise to a height of 9000-11000 feet within 13 miles. To the east the Virginia Range rise to 6000 to 7000 feet within 4 miles. The valley is open to the north and south for considerable distance. The airport is near the valley floor, and terrain is generally flat to north, east and south, and slopes gradually upward to the west as rolling foot-hills.

SMOKE SOURCES:

Smoke generally is not a problem at the airport and seldom reduces visibility below 15 miles. Smoke over the city comes from several lumber mills along the Truckee River, and from a brick kiln just west of town. In the winter, inversions trap smoke throughout the lower portion of the valley, but seldom restrict visibility below 15 miles.

RENO, NEVADA
Municipal AP

AUGUST
3720 Obs.

A TEMPERATURE AND WIND SPEED–RELATIVE HUMIDITY OCCURRENCES:

WIND	0-4 M.P.H.						5-14 M.P.H.						15-24 M.P.H.						25 M.P.H. AND OVER						TOTAL OBS.
REL HUMID	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	
TEMP (°F)																									
99/ 95	17						22						15												54
94/ 90	49						107						47						1						204
89/ 85	115	3					180	1					81	2					1						383
84/ 80	100	20					160	22					77	6					3						388
79/ 75	103	51	4				147	27	2				56	6	1										397
74/ 70	83	100	13	1			88	32	8	1			34	9	1				1		1				372
69/ 65	38	106	38	17	10		50	41	9	4	3		14	6	1										337
64/ 60	18	118	98	16	7	7	16	31	5	2	3		4	8	1		1			1					336
59/ 55	4	84	167	53	12	7	1	17	19		3	1		9											377
54/ 50		37	195	101	15	8		4	21	5				3											389
49/ 45		4	135	111	18				12	5															285
44/ 40			55	80	11				1	6															153
39/ 35			7	18	10	1				2	1														39
34/ 30			1	2	2	1																			6
TOTAL	527	523	713	399	85	24	771	175	77	25	10	1	328	49	4		1		6	1	1				3720

B PERCENTAGE FREQUENCIES OF WIND DIRECTION AND SPEED:

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (IN MILES PER HOUR)									TOTAL	AV SPEED
	0 - 3	4 - 7	8 - 12	13 - 18	19 - 24	25 - 31	32 - 38	39 - 46	47 OVER		
N	2.1	2.4	1.2	.1	.1					5.9	5.6
NNE	1.8	1.8	.9	.1						4.6	5.3
NE	2.6	3.2	.9							6.7	4.8
ENE	1.1	.7	.2	+						2.1	4.4
E	1.2	.4	.1							1.7	3.6
ESE	1.1	.6	.2	+		+				1.9	4.2
SE	2.9	1.5	.2	.1	+					4.7	3.9
SSE	1.8	.6	.3	+						2.8	3.8
S	3.4	1.8	.3	.3	.2	.1				6.2	5.4
SSW	3.4	1.9	.6	.6	.2					6.7	5.7
SW	3.3	1.9	.6	.4	.1					6.2	5.0
WSW	1.2	.6	.6	.8	.1					3.3	8.0
W	1.0	.5	1.2	1.6	.3					4.6	10.3
WNW	1.5	1.3	2.6	4.7	2.7	.1				13.0	13.1
NW	1.9	2.0	2.0	1.4	.3					7.6	8.3
NNW	1.0	.7	.7	.3	.1					2.8	7.2
CALM	19.5									19.5	
TOTAL	50.7	21.8	12.7	10.4	4.1	.2				100	5.7

∞

C OCCURRENCES OF PRECIPITATION AMOUNTS:

INTENSITIES	FREQUENCY OF OCCURRENCE FOR EACH HOUR OF THE DAY																								NO OF DAYS WITH
	A.M. HOUR ENDING AT												P.M. HOUR ENDING AT												
	1	2	3	4	5	6	7	8	9	10	11	NOON	1	2	3	4	5	6	7	8	9	10	11	MID.	
TRACE	2	4	4	2	1	3	2	2	1	1	1	1		1	1		2	4	1	1	1	4	2	2	8
01 IN	1			3	2	1			1			2	1					1	1	2					3
02 TO 09 IN		1											1	1	1	1	1		1	1	1				5
10 TO 24 IN																									3
25 TO 49 IN																									
50 TO 99 IN																									
1.00 TO 1.99 IN																									
2.00 IN AND OVER																									
TOTAL	3	5	4	5	3	4	2	2	2	1	1	3	2	2	2	1	3	5	3	4	2	4	2	2	19

D PERCENTAGE FREQUENCIES OF CEILING–VISIBILITY:

VISIBILITY (MILES)	CEILING (FEET)									
	0	100-200	300-400	500-900	1000-1900	2000-2900	3000-4900	5000-9500	OVER 9500	TOT
0 TO 1/8										
3/16 TO 3/8										
1/2 TO 3/4										
1 TO 2 1/2				+	.1	.1			.2	.4
3 TO 6					+	+	+		1.0	1.1
7 TO 15					.1		.2	1.4	37.6	39.3
20 TO 30								.6	1.3	1.9
35 OR MORE						+		2.2	55.0	57.2
TOTAL				+	.2	.1	.2	4.2	95.2	100

E PERCENTAGE FREQUENCIES OF SKY COVER, WIND, AND RELATIVE HUMIDITY:

HOUR OF DAY	CLOUDS SCALE 0-10			WIND SPEED (M.P.H.)				RELATIVE HUMIDITY (%)					
	0-3	4-7	8-10	0-3	4-12	13-24	25- & OVER	0-29	30-49	50-69	70-79	80-89	90-100
00	85	6	9	66	32	2		1	25	59	11	3	1
01	86	3	10	79	20	1		1	11	65	19	5	+
02	84	6	10	75	25			1	8	54	33	3	2
03	85	6	10	82	18			1	3	45	41	8	3
04	87	4	9	86	14				3	33	54	8	3
05	81	10	9	92	8	1			1	28	52	16	3
06	79	12	9	94	6	1			2	40	46	9	3
07	83	10	7	95	5	1			19	71	6	3	1
08	83	7	10	95	3	1		6	72	18	3	1	+
09	81	7	12	87	10	3		30	65	5	1		
10	81	8	10	65	34	2		61	36	2	1		
11	80	9	11	53	41	6		88	11	1			
12	76	10	14	25	66	9	1	92	7	1			
13	75	12	14	19	65	16	1	96	3	1	1		
14	75	10	14	15	65	20		96	3	1		1	
15	72	10	17	9	52	39		96	2	1		1	
16	68	12	19	9	43	47	1	96	2	1		1	
17	68	14	17	9	35	55	1	91	6	2	1		
18	70	12	19	9	40	50	1	88	10	2			
19	72	12	16	8	48	44	1	76	22	1	1	1	
20	78	7	15	10	59	30	1	63	31	5	1	1	
21	82	7	11	30	54	15		43	43	11	1	1	
22	85	4	12	50	46	5		21	57	19	1	1	1
23	85	5	10	55	43	2		6	42	46	4	2	+
AVG	79	8	12	51	35	15	+	44	20	21	11	3	1

RENO, NEVADA
Municipal AP

ANNUAL
43,848 Obs.

A TEMPERATURE AND WIND SPEED–RELATIVE HUMIDITY OCCURRENCES:

WIND	0-4 M.P.H.						5-14 M.P.H.						15-24 M.P.H.						25 M.P.H. AND OVER						TOTAL OBS
REL. HUMID. / TEMP °F.	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	UNDER 30	30-49%	50-69%	70-79%	80-89%	90-100%	
104/100	1						1						1												2
99/ 95	9						16						10												35
94/ 90	30						59						31						+						120
89/ 85	65	2					115	3					57	1					+						243
84/ 80	95	16					144	12					59	4					3	+					333
79/ 75	101	35	2				138	24	1				54	9	+				3	1					371
74/ 70	89	79	11	1			117	44	6	+			48	15	1				5	2	+				418
69/ 65	76	114	30	8	3	+	86	72	10	3	1		42	24	2		+		3	1	+				477
64/ 60	55	147	84	10	8	3	69	92	22	1	2		36	30	4	+	+		4	4					572
59/ 55	47	148	164	38	11	8	47	97	36	4	2	+	23	45	8	1			2	8	2				690
54/ 50	35	136	222	80	25	7	37	92	74	11	4	1	20	54	24	1	+		7	10	4	1			845
49/ 45	25	116	234	116	38	14	16	85	97	26	9	1	11	47	35	7	3	+	6	14	8	1	+		909
44/ 40	10	98	202	162	62	21	9	65	95	35	21	3	6	35	32	7	5	+	1	7	9	3	1		890
39/ 35	2	51	185	157	123	40	2	33	90	34	35	10	1	12	25	7	10	3		1	3	1	3	1	829
34/ 30		27	147	144	159	72	1	14	65	29	33	15	+	4	11	5	4	3		+	1				733
29/ 25	+	7	102	125	168	47	+	5	25	18	20	5		1	3	2	1	+		+					530
24/ 20		3	62	91	151	40		2	11	12	11	3			1	1		+							387
19/ 15			18	57	108	24		+	5	8	5	1			1		+				+				227
14/ 10			5	33	52	4		+	1	2	3	+													101
09/ 05			1	9	24	+		+	+		2			+											37
04/ 00			1	7	7	+					+	+													15
-01/-05				2	1	1																			4
-06/-10			+	1																					1
TOTAL	637	981	1470	1040	941	280	857	640	538	183	147	39	400	282	148	31	24	7	35	50	27	6	4	1	8770

In Tables A and C, occurrences are for the average year (5-year total divided by 5). Values are rounded to the nearest whole number, but not adjusted to make their sums exactly equal to column and row totals. "+" indicates more than 0 but less than 0.5.

B PERCENTAGE FREQUENCIES OF WIND DIRECTION AND SPEED:

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED IN MILES PER HOUR: 0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	47 OVER	TOTAL	AV SPEED
N	1.9	1.7	1.1	.4	.1	+	+			5.3	6.5
NNE	1.4	1.6	1.1	.3	.1	+				4.6	6.6
NE	2.4	2.0	1.0	.2	+	+				5.6	5.3
ENE	1.1	.7	.4	.1	+					2.4	5.2
E	1.2	.7	.3	.1	+					2.3	4.8
ESE	1.2	.7	.2	.1	+	+				2.2	4.6
SE	2.9	1.5	.5	.2	.1	+	+	+		5.3	5.3
SSE	1.5	.8	.4	.4	.3	.2	.1	+		3.7	9.3
S	3.3	1.6	.8	.9	.6	.3	.1	+		7.5	8.2
SSW	2.8	1.7	.6	.6	.4	.1	.1	+	+	6.3	7.4
SW	3.5	1.8	.7	.5	.2	.1	+	+		6.8	5.6
WSW	1.4	.6	.4	.5	.1	+	+	+		3.1	7.3
W	1.5	.7	.7	1.0	.2	+	+	+		4.2	8.8
WNW	1.8	1.3	1.7	2.9	1.4	.2	+			9.3	11.8
NW	2.1	1.7	1.6	1.3	.3	+				7.0	8.2
NNW	1.0	1.0	.9	.6	.1	+	+			3.6	8.0
CALM	20.6									20.6	
TOTAL	51.7	20.2	12.6	10.0	4.0	1.0	.3	.1	+	100	5.9

C OCCURRENCES OF PRECIPITATION AMOUNTS:

INTENSITIES	FREQUENCY OF OCCURRENCE FOR EACH HOUR OF THE DAY — A.M. HOUR ENDING AT: 1	2	3	4	5	6	7	8	9	10	11	NOON	P.M. HOUR ENDING AT: 1	2	3	4	5	6	7	8	9	10	11	MID	NO. OF DAYS WITH
TRACE	16	15	11	12	13	13	14	14	13	14	17	12	14	16	17	16	17	17	15	14	14	14	15	13	44
01 IN	2	3	5	5	3	2	3	2	2	4	3	3	3	2	3	4	4	4	4	4	3	4	4	5	6
02 TO 08 IN	5	4	4	5	5	5	4	4	5	3	2	4	4	4	3	6	5	5	6	6	6	5	3	3	21
10 TO 24 IN	+	1	1	1	+	+	+	1	+	+	1	+	+	1	1	1	1	1	1	+	+	+	+	1	11
25 TO 49 IN																	+	+	1						6
50 TO 99 IN																									2
100 TO 199 IN																									1
200 IN AND OVER																									1
TOTAL	23	23	21	22	22	20	21	20	20	20	22	19	21	23	25	26	27	27	26	24	23	23	22	22	91

D PERCENTAGE FREQUENCIES OF CEILING–VISIBILITY:

VISIBILITY (MILES)	CEILING (FEET): 0	100-200	200-400	500-900	1000-1900	2000-2900	3000-4900	5000-9500	OVER 9500	TOT
0 TO 1/8	.2	+	+	+	+		+	+	+	.3
3/16 TO 3/8	+	+	+	+	+	+		+	.1	.2
1/2 TO 3/4	+	+	+	.1	.1	+	+	+	.1	.2
1 TO 2 1/2			+	.1	.2	+	+	+	.1	.4
3 TO 6		+	+	+	.4	.3	.2	.1	.3	1.3
7 TO 15				+	.4	.8	2.7	4.5	37.7	46.1
20 TO 30					+	.1	.6	1.0	2.0	3.7
35 OR MORE						.1	.9	4.3	42.6	47.9
TOTAL	.2	.1	+	.2	1.1	1.2	4.3	10.0	82.9	100

E PERCENTAGE FREQUENCIES OF SKY COVER, WIND, AND RELATIVE HUMIDITY:

HOUR OF DAY	CLOUDS SCALE 0-10: 0-3	4-7	8-10	WIND SPEED (M.P.H.): 0-3	4-12	13-24	25 & OVER	RELATIVE HUMIDITY (%): 0-29	30-49	50-69	70-79	80-89	90-100
00	65	11	24	64	30	6	1	1	13	42	22	17	5
01	65	12	23	67	27	5	1	1	8	39	26	22	6
02	65	11	23	69	25	5	1	1	5	33	29	24	7
03	67	9	24	71	23	4	1	1	4	27	31	29	8
04	65	10	25	72	22	5	1	1	4	24	32	31	9
05	63	11	26	75	20	5	1	1	3	21	33	34	9
06	59	12	30	76	19	4	1	+	4	29	27	31	9
07	56	12	32	78	16	5	1	1	15	36	18	23	7
08	55	12	33	78	15	6	1	3	34	29	14	14	6
09	56	9	34	71	20	7	1	13	41	24	11	8	3
10	55	11	34	59	31	8	2	27	37	23	8	3	1
11	53	13	35	48	38	12	2	43	32	19	4	2	1
12	52	12	36	36	45	16	3	51	29	16	2	2	1
13	50	13	38	31	46	20	2	56	28	12	2	2	1
14	47	14	39	26	44	28	2	59	27	10	2	1	+
15	46	14	40	24	41	32	3	59	27	9	2	2	+
16	46	13	41	23	39	36	2	57	26	12	2	2	1
17	48	14	38	21	42	35	2	48	24	19	4	3	1
18	50	14	36	24	43	31	1	39	27	21	7	4	1
19	53	13	34	28	46	25	1	28	32	23	10	6	1
20	57	12	31	36	46	17	1	20	32	27	11	8	2
21	59	13	28	46	42	12	1	12	32	29	14	10	3
22	63	10	27	55	36	8	1	6	29	34	16	12	3
23	64	11	25	61	32	6	+	2	21	39	18	16	4
AVG	57	12	31	52	33	14	1	22	22	25	14	13	4

NATIONAL CLIMATIC DATA CENTER
STATE CLIMATOLOGIST EXCHANGE PROGRAM

COLORADO

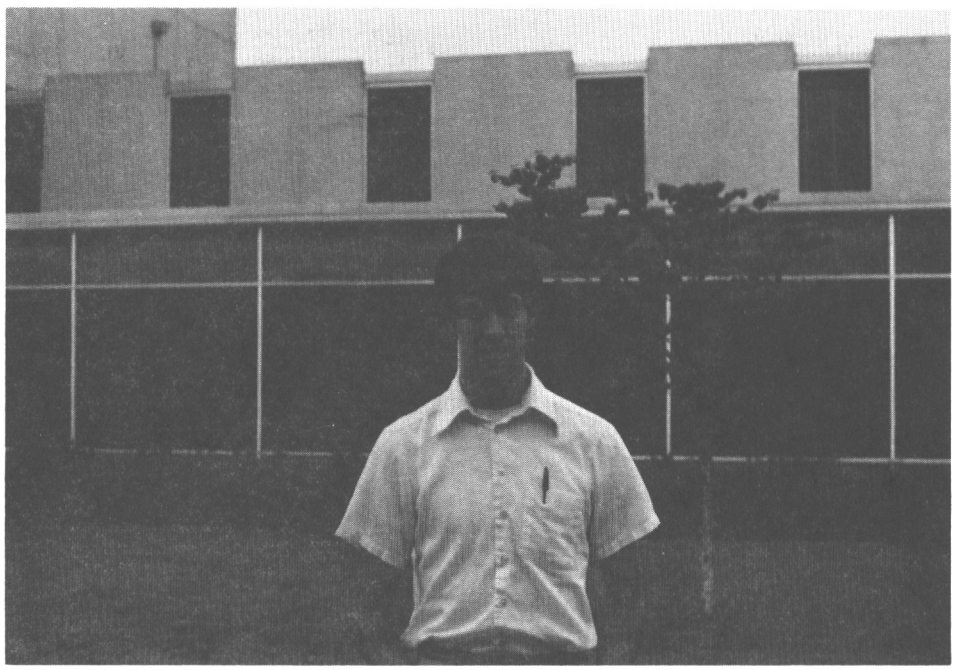
Mr. Nolan Doesken, Assistant State Climatologist, from the Colorado Climate Center (CCC) was the second of nine total candidates who were chosen for FY 1985. During his three week visit at the National Climatic Data Center (NCDC), Nolan worked on several tasks of related interest to both NCDC and the Colorado Climate Center. The first was to have Nolan work through the NCDC quality control process for a month of Colorado data. In addition to his becoming more familiar with NCDC's QC process, Nolan also became aware of our limited knowledge of specific meteorological events in each state that might affect data values from station to station. It was as a direct result of this exchange that the CCC is now providing NCDC with a brief summary of significant weather events in Colorado that might affect our quality control of the co-op data. Several examples are:

(1) high winds that might shake an instrument shelter resulting in an erroneous minimum temperature reading;

(2) strong radiation, minimum temperatures lower in the valley stations;

(3) strong thunderstorms resulting in some locally heavy rains at some stations.

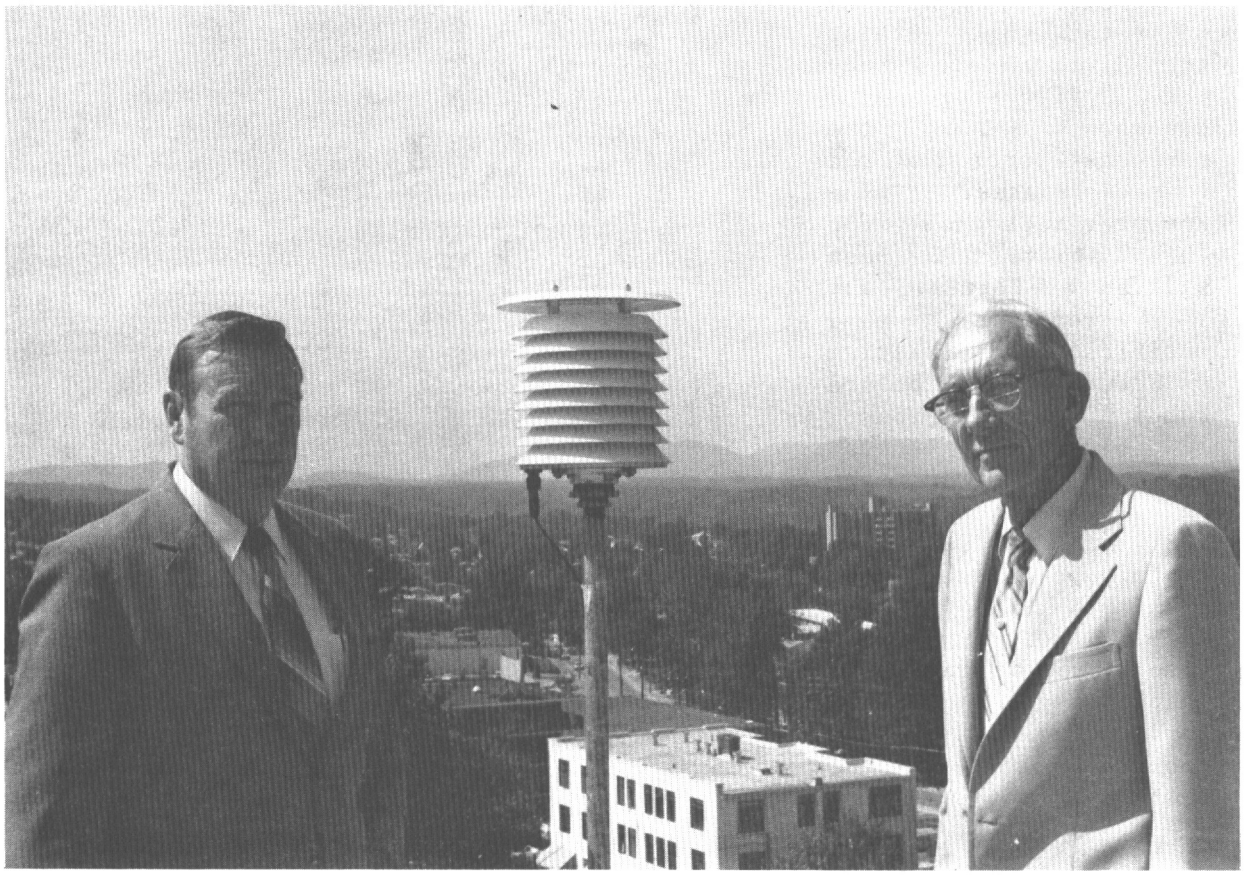
Nolan was also very helpful in his review of our station history files. It is through such cooperation that this station history file is becoming the best and most accurate available.



SOUTH CAROLINA

Mr. John Purvis, State Climatologist from South Carolina, was our third participant in this year's Exchange Program. John also spent about three weeks here at NCDC, and with John's former position as Meteorologist-in-Charge at the Columbia NWSFO, was invaluable in the review of the South Carolina station history file. As we were to learn, many of the station history forms had been signed by John while he was in the National Weather Service. John did seem pleasantly surprised when he ran across a photograph of himself and four other weather service personnel that was taken several days after he began work in 1940.

While here at the NCDC, John investigated numerous other related subjects to South Carolina. The following are only a few of them: county climate narratives for the Federal Emergency Management Administration (FEMA), maps of first and last freeze dates, state temperature extremes, wind summaries (roses) for environmental impact studies, file structure and capacity of data on floppy disk, and a hands on demonstration of the NCDC/State Climatologist "VAX Dial Up" and data retrieval.

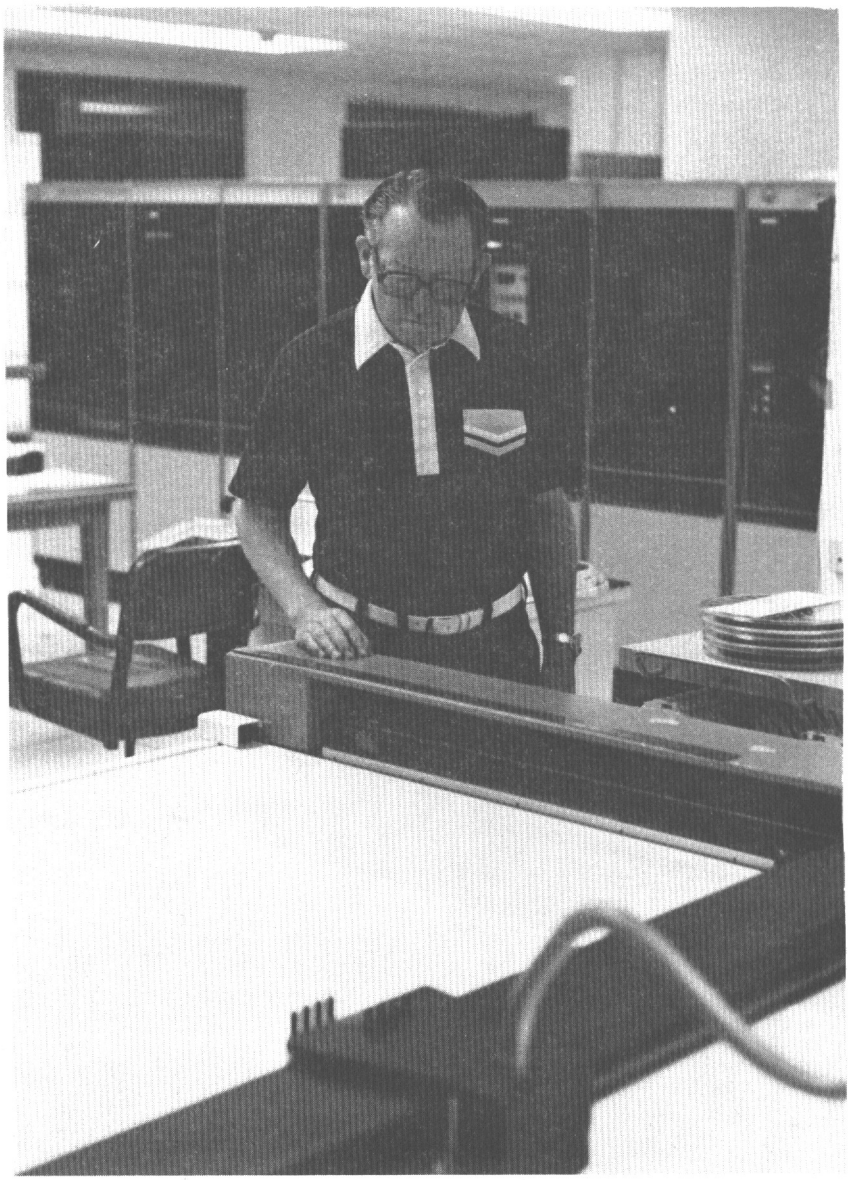


NCDC Director Dr. Kenneth Hadeen (left) and Mr. John Purvis (right).

NEW JERSEY

Professor A. Vaughn Havens was our fourth participant this year. The professor's first week here overlapped the last week of Mr. Purvis' visit, thus allowing some interaction between the State Climatologists themselves. Based on feedback from last year's and this year's participants, it seems that such interaction is one of the added benefits of the Exchange Program.

Professor Havens' major task while here at the NCDC was to study the frequency of droughts in the northeast portion of the United States. The computer program for this study had been written at Cornell, but it requires some modification and testing by NCDC personnel before running on our Sperry 1100/62. Data used in the program was developed by Tom Karl of NCDC and was the Palmer Hydrologic Drought Index 1931-1984 (TD9640). The use of the program and data should help in identifying and comparing past and present drought episodes in the northeast.



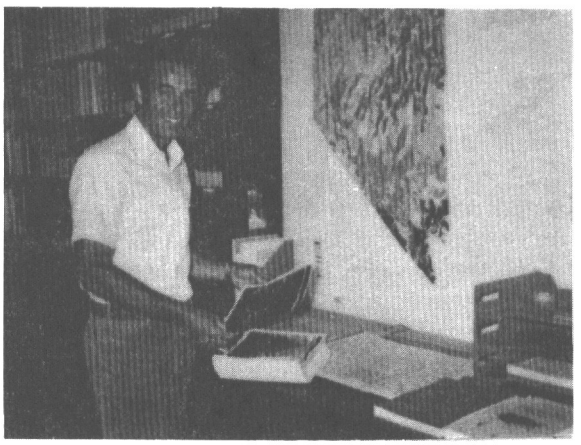
Professor Vaughn Havens viewing the CALCOMP Plotter.

The station history file for New Jersey also did not escape the scrutiny of Professor Havens, pariticularly those 12 stations that have been identified by NCDC's Bill Brower in his long-term station file. Professor Havens said that he recognized the names of many Cooperative Program Managers (CPMs) and observers. One station (Indian Mills, NJ) has had only two observers in 84 years of record.

NEVADA'S STATE CLIMATOLOGY PROGRAM

After the departure of the federally appointed State Climatologist, Clarence Sakamoto, in the early 1970's, Nevada's State Climatology program saw little progress for many years. There were several reasons for this, including an almost complete lack of funds and support in Nevada, and in more recent years the illness of Richard O. Gifford, Professor of Plant, Soil and Water Science at the University of Nevada Reno (UNR). He was appointed to the State Climatology position later in the 1970's, serving until his untimely death in early 1984. At that time John W. James, Associate Professor of Geography at UNR, was appointed to the position, inheriting a mass of climatic material in assorted boxes, footlockers and file cases, with no place to put it, a dearth of support and funding, and a lack of public visibility.

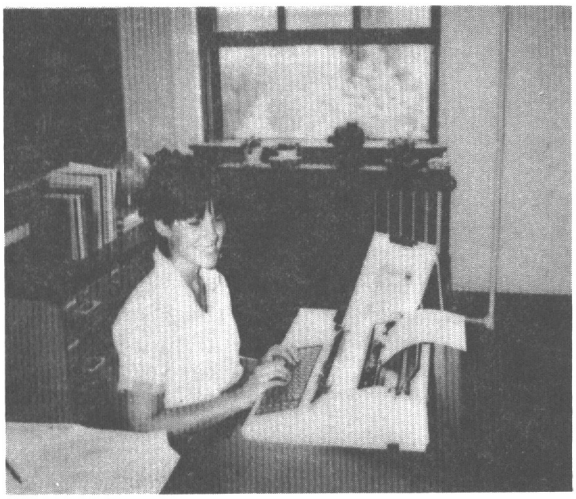
With the active support of several persons, including the Geography Department Chairman, Christopher Exline, Dean of the College of Arts and Science, Paul Page, the University's Vice President, Richard O. Davies, and Meteorologist-in-Charge of the Reno National Weather Service Office, and Nevada Area Manager, Glenn Trapp, a room was obtained for a State Climate Library and the word was passed around concerning the importance of a good State Climatology Program. In addition, beginning in April 1984, the first Monthly Weather Summary for Nevada was mailed to over 100 persons in and out of the state. This report went to the news media as well, and helped improve the program's visibility.



S. C. John James inspecting satellite photos donated by the NWS Nuclear Support Office Las Vegas, thanks to Darrel Randerson and Bob Titus.

Also, the fine effort of State Assemblyman David Nicholas of Incline, who introduced AB 413 to this years' Nevada Legislature establishing the Office of State Climatologist, was instrumental in the bill passing in June 1985. Governor Richard Bryan was very supportive of this bill and the State Climatology Program, publically stating such several times. Others that served on Legislative Committees that listened to testimony by the State Climatologist and Assemblyman Nicholas were very cooperative, such as Senator William Raggio of Reno.

Unfortunately, due to other pressing legislative matters with higher priorities, and a lack of funds to support all needs, AB 413 contained no provision for funding. To help alleviate this problem, and to prevent a continuation of funding out of the State Climatologist's personal monies, along with small donations, in late June Governor Bryan recommended to the University of Nevada that some University funds be supplied this academic year. This



Cheryl Miskei, Univ. of Nevada Reno, Geography Dept. Secretary. Cheryl has been invaluable the last year in producing the Nevada Climate Summary. UCLA Graduate School is her next task.

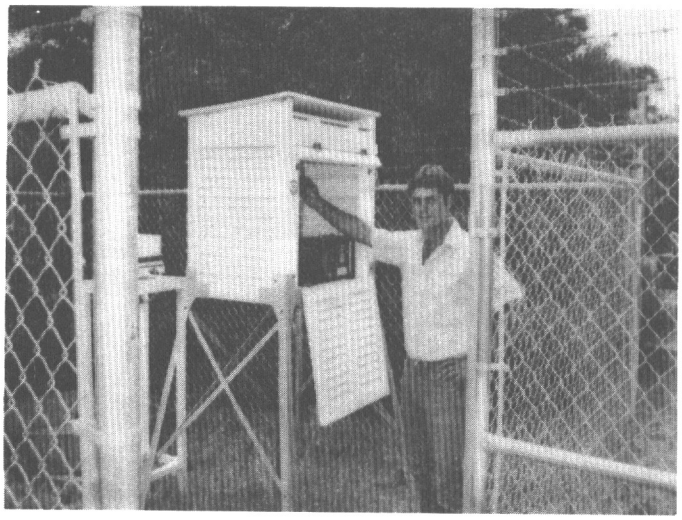
funding would cover costs of a part-time librarian to take care of the new library and to help update the Nevada Cooperative Local Climatological Data Forms (LCD's), many of which have not been revised since 1968, and to make new summaries for stations without LCD's. The funds would also pay for the preparation, printing, and mailing of the Monthly Weather Summary, and give some limited travel funds to the State Climatologist.

Based on this request, University of Nevada Reno President Joseph Crowley, himself an ardent supporter of the Climatology Program, asked College of Arts and Science Dean Paul Page to arrange some interim financing for the State Climatology Program for the 1985-86 academic year. This, in spite of an already tightly allocated University budget.

Obviously, the Nevada State Climatology Program could not progress without all the support mentioned, and from others such as several of Nevada's newspapers, including the Battle Mountain Bugle, Humboldt Sun, Ely Daily Times, and the Las Vegas Review Journal. In addition, other groups such as the Reno and Las Vegas National Weather Service Offices, Sierra Pacific Power Company, and the U.S. Soil Conservation Service, and many individuals, have lent their support. The cooperation, advice, and very helpful attitude of members of the National Climatic Data Center, especially Grant Goodge, have made the task of State Climatologist much easier, and enjoyable. All of this is greatly appreciated.

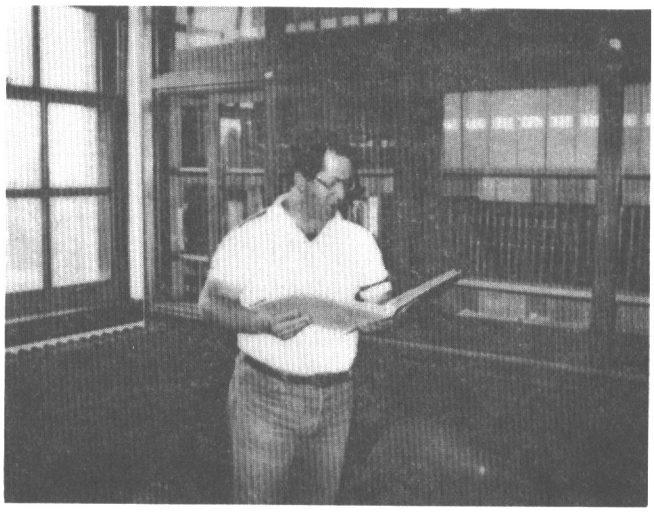
Thus, the 1985-86 year begins with a better outlook for the development of State Climatology in Nevada. For our part, we plan to continue to access and archive Nevada's climatological information and related material in the new designated William Phillips Memorial Climatological and Map Library in Mackay Science Hall at UNR. As a part time librarian is able, we hope to update all the State's LCD's and prepare ones for new stations. We will also continue to

Cathy James had the nearly impossible task of organizing a mass of various materials into a State Climate Library. She did a great job. To bad we can't keep her.



Louis Loftin, a Senior Geography major, is the University of Nevada Reno weather observer and also aids the State Climatologist in the compilation of data for the Nevada Monthly Weather Summary.

Dr. Christopher Exline, Geography Department Chairman and Chairman of the UNR Faculty Senate, a staunch supporter of the State Climatology program, was instrumental in obtaining the State Climate Library space. Here he is viewing some of the 100 plus year old Nevada weather records.



publish the Monthly Weather Summary and distribute it to all those that express an interest. We hope that some funding is available this year to travel in Nevada in order to tell the public personally about the program and to solicit their ideas and needs. We will also continue to work closely with the National Weather Service Cooperative Program Managers for Nevada, including Bert Soileau in Reno, in the location and re-location and needs for weather stations in the State. As time allows, the State Climatologist plans to write a climatology of the state, county by county, and to update the 30 year-plus old Substation History for Nevada. We are also beginning a program to take photos of the site exposure of each weather station in Nevada, published and unpublished, as part of the Station History.

John W. James
State Climatologist for Nevada