CLIMATOGRAPHY OF THE UNITED STATES PUBLICATION SERIES

The publications in this series are designed to present in summary form the climatological averages and normals for stations operated by the National Weather Service (NWS) and its cooperators in each of the 50 states, Puerto Rico, and the U.S. Virgin Islands. Most publications are revised and/or updated after the end of each decade, the last year of which is divisible by ten; e.g., 1980. This pamphlet describes the contents of each publication in this series, with samples of the data formats, and the relationship to similar antecedent publications, if any. Any of these items can be secured by addressing an inquiry to the National Climatic Data Center, Federal Building, Asheville, NC 28801. Orders may also be placed by telephone by calling (704) 259-0682, or FTS 672-0682. Prices will be given upon request.

The National Climatic Data Center (NCDC) revises and publishes climatic normals for temperature, precipitation, heating degree days, and cooling degree days for all stations at the end of each decade for each NWS station and in interim years if revisions are needed to reflect changes in station location and/or instrument exposure. Climatic normals are based upon the 30-year period ending with the last year in the preceding decade. The temperature and precipitation normals for Cooperative Climatological Stations are the simple 30-year averages of the climatic element; for NWS stations the normals are based upon the same 30-year period of record but are adjusted to reflect the conditions at the current observation site. Normal values for heating degree days and cooling degree days are derived from the monthly mean temperature normals using rational conversion formulae developed by Thom (1,2,3) rather than from the simple arithmetic averages. In some cases, that procedure yields values that are unexpected - a relatively small number of degree days. These cases occur during the transition months and are not statistically significant.

References

1. Thom, H.C.S., 1952: Seasonal degree-day statistics for the United States. Monthly Weather Review, 80, 143-149.

2. Thom, H.C.S., 1954: The rational relationship between heating degree days and temperature. Monthly Weather Review, 82, 1-6.

3. Thom, H.C.S., 1966: Normal degree days above any base by the universal truncation coefficient. Monthly Weather Review, 94, 461-465.

Climatography of the United States:
Number 20 - Climate of Cities.

Number 60 - Climate of States.

Number 81 - Monthly Normals.

Number 84 - Daily Normals.

Number 85 - Divisional Normals.

Number 90 - Airport Climatological Summary.

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE / NATIONAL CLIMATIC DATA CENTER ASHEVILLE, N.C. (REV.) OCT 1983

CLIMATOGRAPHY OF THE UNITED STATES NO. 20, Climate of (Name of City). These published summaries present means and extremes data (Exhibit 1); freeze probability statistics (Exhibit 2); precipitation probability statistics (Exhibit 3); sequential tables of monthly and annual mean maximum, mean minimum, and average temperatures (Exhibits 4, 5, and 6); monthly and annual normals (Exhibit 7); and sequential tables of monthly and annual total precipitation and snowfall (Exhibits 8 and 9). Summaries have been prepared for 1,063 Cooperative Climatological Stations in the 50 states and Puerto Rico. Each summary is based upon the period of record beginning in 1951 through 1970, or through the latest complete year of record (1971, 1972, 1973, 1974, or 1975) available at the time the summary was prepared.

Similar summaries that contain a narrative description of the local climate and station history information are available for nearly 1,000 additional stations. Those summaries are based upon an earlier and generally a longer period of record and, in general, do not contain the data compilations shown in Exhibits 2, 3, 4, 5, and 7.

EXHIBIT 1

LATITUDE N31 32 — LONGITUDE W84 08

CLIMATOLOGICAL SUMMARY

MEANS AND EXTREMES FOR PERIOD 1951-1975

ALBANY 3 SE, GA — ELEVATION 180

MONTH	TEMPERATURE (°F) MEANS: DAILY MAXIMUM	DAILY MINIMUM	MONTHLY	EXTREMES: RECORD HIGHEST	YEAR	DAY	RECORD LOWEST	YEAR	DAY	MEAN NUMBER OF DAYS: MAX. 90° AND ABOVE	MAX. 32° AND BELOW	MIN. 32° AND BELOW	MIN. 0° AND BELOW	PRECIPITATION TOTALS (INCHES): MEAN	GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY	SNOW, SLEET: MEAN	MAXIMUM MONTHLY	YEAR	GREATEST DEPTH	YEAR	DAY	MEAN NUMBER OF DAYS: .10 or MORE	.50 or MORE	1.00 or MORE
JAN	61.6	38.0	49.8	82+	75	31	6	66	31	0	0	11	0	4.34	11.94	64	2.75	73	1	.0						7	3	1
FEB	63.9	39.5	51.7	84+	62	27	11	66	1	0	0	8	0	4.89	9.36	74	3.25	74	9	.1	3.0	73	3.0	73	10	7	3	1
MAR	70.8	45.4	58.1	90+	55	12	21+	68	4	0	0	4	0	4.90	9.09	71	3.32	59	6	.0						7	3	1
APR	79.2	53.3	66.3	93	62	30	30+	71	3	1	0	0	0	4.60	9.41	73	3.55	75	10	.0						6	3	2
MAY	86.1	61.0	73.6	102	62	20	39+	71	5	10	0	0	0	3.91	6.97	66	2.88	58	20	.0						6	3	1
JUN	90.6	67.8	79.2	105	52	28	49	56	3	19	0	0	0	4.85	11.17	65	3.04	72	20	.0						8	4	2
JULY	92.0	70.6	81.3	103	52	25	57	67	16	23	0	0	0	5.84	9.98	59	3.66	56	16	.0						9	4	2
AUG	92.2	70.2	81.2	103+	54	18	57	67	15	23	0	0	0	3.97	8.73	61	3.88	54	8	.0						7	2	1
SEPT	88.5	65.9	77.2	101+	57	2	37	67	30	19	0	0	0	4.05	10.09	53	3.98	56	25	.0						5	2	1
OCT	80.3	54.2	67.3	98	54	6	29+	68	28	2	0	1	0	1.85	6.90	59	3.05	59	30	.0						3	1	0
NOV	70.4	43.2	56.9	89+	61	4	14+	70	20	0	0	5	0	2.35	8.28	57	2.99	57	30	.0						4	2	1
DEC	63.2	38.2	50.7	81	71	17	6	62	13	0	0	11	0	3.93	9.99	53	2.58	61	13	.0						6	3	1
YEAR	78.2	53.9	66.1	105	JUN 52	28	6+	DEC 62	13	99	0	40	0	49.48	11.94	JAN 64	3.98	SEP 56	25	.1	3.0	FEB 73	3.0	FEB 73	10	73	33	14

+ ALSO ON EARLIER DATES

EXHIBIT 2

FREEZE PROBABILITIES

PROBABILITY OF LATER DATE IN SPRING (MO/DA) THAN INDICATED

TEMP	.10	.20	.30	.40	.50	.60	.70	.80	.90
32	4/ 1	3/25	3/20	3/16	3/12	3/ 8	3/ 4	2/27	2/20
28	3/31	3/19	3/10	3/ 3	2/24	2/17	2/ 9	1/31	1/19
24	3/17	3/ 5	2/25	2/18	2/11	2/ 4	1/27	1/18	1/ 3
20	2/17	2/ 8	2/ 1	1/25	1/19	1/12	1/ 3	0/ 0	0/ 0
16	2/ 1	1/23	1/14	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0

0/ 0 PROBABILITY OF OCCURRENCE OF THRESHOLD TEMP IS LESS THAN INDICATED PROBABILITY

PROBABILITY OF EARLIER DATE IN FALL (MO/DA) THAN INDICATED

TEMP	.10	.20	.30	.40	.50	.60	.70	.80	.90
32	10/25	11/ 1	11/ 9	11/ 9	11/13	11/16	11/20	11/25	12/ 1
28	11/ 7	11/13	11/19	11/22	11/26	11/29	12/ 3	12/ 8	12/14
24	11/12	11/21	11/28	12/ 4	12/ 9	12/15	12/21	12/28	1/ 9
20	11/30	12/10	12/17	12/24	12/30	1/ 6	1/16	0/ 0	0/ 0
16	12/24	1/ 8	1/24	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0

0/ 0 PROBABILITY OF OCCURRENCE OF THRESHOLD TEMP IS LESS THAN INDICATED PROBABILITY

PROBABILITY OF LONGER THAN INDICATED FREEZE FREE PERIOD (DAYS)

TEMP	.10	.20	.30	.40	.50	.60	.70	.80	.90
32	276	266	258	251	245	239	232	224	213
28	318	303	292	283	274	266	256	245	230
24	>365	329	314	304	295	286	278	268	254
20	>365	>365	>365	>365	340	330	322	313	303
16	>365	>365	>365	>365	>365	>365	>365	>365	349

EXHIBIT 3

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

LVL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0.05	1.04	1.48	1.21	1.00	0.95	2.15	2.76	1.17	0.89	0.00	0.43	1.37
0.10	1.44	1.93	1.66	1.41	1.20	2.49	3.27	1.53	1.26	0.14	0.64	1.73
0.20	2.07	2.62	2.37	2.08	1.77	3.19	3.96	2.10	1.85	0.49	0.98	2.26
0.30	2.63	3.21	3.00	2.69	2.29	3.60	4.52	2.59	2.39	0.79	1.30	2.71
0.40	3.19	3.79	3.62	3.30	2.90	4.14	5.04	3.06	2.92	1.10	1.62	3.14
0.50	3.78	4.38	4.28	3.94	3.35	4.60	5.57	3.55	3.49	1.44	1.97	3.58
0.60	4.45	5.05	5.02	4.60	3.98	5.07	6.12	4.10	4.13	1.83	2.37	4.07
0.70	5.20	5.78	5.86	5.53	4.70	5.65	6.75	4.71	4.87	2.32	2.84	4.60
0.80	6.20	6.74	6.96	6.65	5.45	6.37	7.55	5.51	5.85	2.94	3.46	5.28
0.90	7.91	8.36	8.84	8.56	7.26	7.45	8.75	6.87	7.52	4.03	4.52	6.46
0.95	9.29	9.64	10.37	10.15	8.61	8.63	9.83	7.93	8.90	5.02	5.43	7.33

EXHIBIT 4

STATION: 09 0140 MAX TEMP ALBANY 3 SE, GA

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
51	64.3	67.0	72.4	78.5	87.0	93.6	94.7	95.2	90.2	82.2	68.1	67.7M	79.9M
52	70.0	65.7	72.6	78.8	86.5	96.2	96.2	92.5	85.3	77.1	69.9	59.7	79.0
53	65.0	63.9	74.5	77.3	89.4	93.0	91.3	92.3	86.5	80.9	68.9	60.5	78.6
54	65.5	69.8M	70.5	83.0	82.1	94.3	96.3	96.9	94.2	83.3	68.1	61.2	80.4M
55	61.1	66.2	70.4	83.1	89.8	90.2	92.9	95.6	89.3	79.8	70.0	62.9	79.9
56	60.8	71.2	72.5	79.2	89.2	[illegible]	[illegible]	96.0	89.0	80.5	70.7	71.8	80.5
57	66.9	73.6	70.6	81.0	[illegible]	[illegible]	[illegible]	94.1	87.1	76.4	71.1	64.3	79.6
58	56.2	56.7	67.0	79.7	[illegible]	[illegible]	[illegible]	[illegible]	92.2	79.2	75.6	60.7	77.4
59	62.1	65.5	69.1	79.5	[illegible]	[illegible]	[illegible]	[illegible]	88.4	79.1	71.3	64.3	78.9
60	61.2	62.9	67.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	82.7	73.7	61.5	78.3
61	57.9	70.0	[illegible]	[illegible]	[illegible]	89.3	93.1	[illegible]	[illegible]	83.8	75.8	64.7	79.6
62	60.7	74.5	[illegible]	[illegible]	85.5	91.4	93.4	[illegible]	[illegible]	[illegible]	88.7	60.1	80.2
63	58.3	61.2	[illegible]	[illegible]	88.3	91.4	92.6	94.5	[illegible]	[illegible]	69.4	55.4	78.1M
64	56.1E	[illegible]	[illegible]	[illegible]	84.7	91.2	87.8	88.4	[illegible]	[illegible]	72.3	63.6	76.0E
70	52.4	[illegible]	[illegible]	80.6	86.8	88.0	92.4	90.4	[illegible]	[illegible]	[illegible]	67.1	77.5
71	[illegible]	[illegible]	84.4	78.0	81.2	91.2	89.5	90.0	88.8	[illegible]	[illegible]	[illegible]	77.6
72	[illegible]	[illegible]	72.2	79.3	82.0	88.8	91.2	93.1	92.9M	80.6	[illegible]	[illegible]	78.3M
73	[illegible]	59.3M	77.7	73.7	82.7	88.6	93.0	91.3	90.3	82.9	[illegible]	[illegible]	77.8M
74	[illegible]	64.0	74.5	77.2	85.8	87.9	89.0	86.1	83.0	78.5	[illegible]	[illegible]	77.6
75	[illegible]	66.5	69.4	75.3	86.5	88.5	84.0M	87.6	83.5	80.8	70.6M	[illegible]	[illegible]
SUM	1541.0	1597.1	1771.2	1978.8	2153.7	2264.5	2299.4	2304.3	2213.2	2008.2	1761.1	1578.8	[illegible]

EXHIBIT 5

STATION: 09 0140 MIN TEMP ALBANY 3 SE, GA

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
51	40.0	43.0	50.6	54.7	61.2	[illegible]	[illegible]	73.4	70.1	60.2	44.8	47.0	57.4
52	48.1	47.3	48.3M	53.4	63.9	[illegible]	[illegible]	[illegible]	66.5	51.7	44.1	39.5	56.8M
53	42.2	43.0	49.8	51.7	[illegible]	[illegible]	[illegible]	[illegible]	65.9	56.6	44.0	40.0	56.3
54	41.0	43.0M	46.9	60.0	[illegible]	[illegible]	[illegible]	[illegible]	68.8	55.6	42.8	38.1	55.9M
55	38.9	41.5	50.4	[illegible]	[illegible]	[illegible]	70.8	[illegible]	[illegible]	52.0	43.9	39.8	55.0
56	34.8	47.7	[illegible]	[illegible]	[illegible]	67.4	69.5	[illegible]	[illegible]	57.9	43.0	45.6	55.1
57	44.9	51.1	[illegible]	[illegible]	64.0	71.0	71.9	69.8	[illegible]	[illegible]	49.7	39.4	57.3
58	34.8	[illegible]	[illegible]	[illegible]	62.8	70.3	71.2	71.0	[illegible]	[illegible]	48.7	37.5	56.4
69	34.2	[illegible]	[illegible]	51.4	57.9	67.9	71.2	67.2	[illegible]	[illegible]	[illegible]	31.4	50.7
70	[illegible]	[illegible]	[illegible]	55.0	58.8	65.7	68.5	71.5	67.4	[illegible]	[illegible]	36.4	51.5
71	[illegible]	[illegible]	38.5	45.8	55.3	65.7	69.9	69.7	65.4	57.6	[illegible]	[illegible]	52.3
72	[illegible]	37.4	43.9	51.4	58.5	62.9	67.8	69.4	65.0M	55.2	[illegible]	[illegible]	53.6M
73	[illegible]	34.8M	51.6	51.6	58.3	67.9	70.9	69.6	68.0	54.4	[illegible]	[illegible]	53.9M
74	[illegible]	37.9M	47.4M	51.9	62.7	65.1	69.1	69.3	64.8	47.3	41.0	[illegible]	[illegible]
75	40.0	41.9	43.6	49.8	63.5	68.2	70.0	70.6	63.5	55.8	43.9M	[illegible]	[illegible]
SUM	950.2	986.8	1134.0	1393.5	1520.2	1695.0	1764.1	1755.2	1647.7	1355.6	1080.8	955.7	[illegible]

EXHIBIT 6

STATION: 09 0140 AVERAGE TEMPERATURE ALBANY 3 SE, GA

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
51	52.2	55.0	61.5	65.6	74.1	[illegible]	[illegible]	84.3	80.2	71.2	56.4	57.4M	68.7M
52	59.1	56.5	60.9M	65.1	75.2	[illegible]	[illegible]	82.0	75.9	64.4	57.0	49.6	67.9M
53	53.6	53.5	62.2	64.5	[illegible]	[illegible]	[illegible]	[illegible]	76.2	68.8	56.5	50.3	67.5
64	45.1E	45.9	57.3	66.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	62.3	58.6	51.8	66.5E
65	49.2	49.0	54.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64.4	58.4	48.3	66.9
66	[illegible]	67.5	[illegible]	[illegible]	[illegible]	74.7	82.0	[illegible]	[illegible]	[illegible]	55.8	47.8	63.8
67	49.8	47.0	[illegible]	[illegible]	[illegible]	77.1	77.9	78.7	[illegible]	[illegible]	53.8	54.3	66.4
68	45.2	[illegible]	[illegible]	[illegible]	71.3	78.9	81.0	81.8	[illegible]	[illegible]	52.8	45.6	63.7
69	46.8	[illegible]	[illegible]	[illegible]	70.7	80.3	82.0	78.1	[illegible]	[illegible]	[illegible]	46.0	63.6
70	40.3	[illegible]	[illegible]	67.8	72.8	76.9	80.5	81.0	79.5	[illegible]	[illegible]	51.8	64.5
71	[illegible]	[illegible]	52.5	61.9	68.3	78.5	79.4	79.9	77.1	[illegible]	[illegible]	[illegible]	65.0
72	[illegible]	[illegible]	58.1	65.4	70.3	75.9	79.9	81.3	79.0M	67.6	[illegible]	[illegible]	66.0M
73	[illegible]	47.1M	62.2	62.7	70.5	78.3	82.0	80.5	79.2	68.7	[illegible]	[illegible]	[illegible]
74	[illegible]	51.0M	61.0M	64.6	74.3	76.5	79.1	77.7	73.9	62.9	55.9	[illegible]	[illegible]
75	52.4	54.2	54.9	62.6	75.0	78.4	77.0M	79.1	73.5	68.3	57.3M	[illegible]	[illegible]
SUM	1240.2	1292.5	1659.3	1050.6	1840.6	1980.4	2032.3	2030.4	1931.1	1682.5	1421.6	1268.0	1653.0

EXHIBIT 7

MONTHLY NORMALS OF TEMPERATURE, PRECIPITATION AND HEATING AND COOLING DEGREE DAYS (1941-70)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
TEMPERATURE	50.7	53.1	58.9	67.4	74.6	80.3	81.8	81.6	77.5	68.0	57.5	50.9	66.9
PRECIPITATION	3.86	4.16	5.49	4.35	3.87	4.56	5.64	4.14	3.90	2.21	2.47	4.19	48.84
HEATING DEGREE DAY	468	371	243	42	0	0	0	0	0	54	247	447	1872
COOLING DEGREE DAY	25	38	94	114	302	459	521	515	375	147	22	10	2582

EXHIBIT 8

STATION: 09 0140 — TOTAL PRECIPITATION — ALBANY 3 SE, GA

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
51	1.32	1.28	6.10	4.81	2.08	3.86	3.23	3.32	5.63	.69	6.33	4.74	43.19
52	1.84	6.75	4.75	4.35	6.20	[illegible]	2.81	7.19	4.25	.41	3.04	3.20	46.94
53	4.76	5.26	3.29	5.44	5.63	[illegible]	[illegible]	3.55	10.09	.25	1.69	9.99	61.29
54	.90	1.08	2.95	3.09	[illegible]	[illegible]	[illegible]	3.98	1.26	.58	3.04	2.18	31.73
55	3.41	1.89	.08	7.02	[illegible]	[illegible]	[illegible]	[illegible]	3.92	3.26	.84	.84	37.38
56	2.54	4.39	5.09	[illegible]	[illegible]	2.93	[illegible]	[illegible]	[illegible]	2.68	1.23	3.30	45.95
57	1.19	1.22	[illegible]	[illegible]	[illegible]	2.65	5.39	[illegible]	[illegible]	2.72	8.28	1.90	50.20
58	3.05	6.69	[illegible]	[illegible]	3.18	7.69	5.30	[illegible]	[illegible]	1.22	1.22	3.41	49.91
59	4.06	6.09	[illegible]	[illegible]	5.78	4.08	7.99	3.30	[illegible]	[illegible]	.34	2.68	56.42
70	2.77	[illegible]	[illegible]	7.90	6.67	5.13	5.42	6.92	[illegible]	[illegible]	.82	4.47	49.78
71	[illegible]	[illegible]	9.09	4.07	5.97	2.70	9.26	7.74	1.00	[illegible]	[illegible]	7.82	62.81
72	[illegible]	[illegible]	6.04	.46	3.07	7.43	6.28	4.50	2.90	3.16	[illegible]	[illegible]	52.18
73	[illegible]	6133	6.26	9.41	5.66	5.90	2.52	3.95	2.93	.32	[illegible]	[illegible]	59.75
74	[illegible]	9.36	4.54E	4.39	4.64	6.27	8.04	7.13	8.58	.76	[illegible]	[illegible]	[illegible]
75	[illegible]	2.46	7.76	[illegible]	[illegible]	[illegible]	[illegible]	2.05	1.93	2.12	1.80	[illegible]	[illegible]
[illegible]	108.60	122.15	122.45	114.99	97.69	121.30	145.88	99.34	101.37	46.33	98.74	98.13	1239.97

EXHIBIT 9

STATION: 09 0140 — TOTAL SNOWFALL — ALBANY 3 SE, GA

SEASON	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	SEASON
50-51								.0	.0	.0	.0	.0	
51-52	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
52-53	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
53-54	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
69-70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
70-71	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
71-72	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
72-73	.0	.0	.0	.0	.0	.0	.0	.0	3.0	.0	.0	.0	3.0
73-74	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
74-75	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
75-76	.0	.0	.0	.0	.0	.0							
[illegible]	.0	.0	.0	.0	.0	.0	.0	3.5	.0	.0	.0	.0	3.5

E AMOUNT IS WHOLLY OR PARTLY ESTIMATED.

T TRACE, AN AMOUNT TOO SMALL TO MEASURE.

M ONE OR MORE DAYS OF RECORD MISSING; IF AVERAGE VALUE IS ENTERED, LESS THAN 10 DAYS RECORD IS MISSING.

O WATER EQUIVALENT OF SNOWFALL WHOLLY OR PARTLY ESTIMATED.

CLIMATOGRAPHY OF THE UNITED STATES NO. 60, Climate of (Name of State). This publication is issued for each of the 50 states and for Puerto Rico and the U.S. Virgin Islands combined. Each publication contains a narrative climatic summary of the state, the means and extremes table for each station in the state that is included in the CLIMATOGRAPHY OF THE UNITED STATES NO. 20 series (Exhibit 1); and the normals, means, and extremes table (Exhibit 10) from the latest Local Climatological Data, Annual Summary for NWS Stations that was available for the area at the time of publication. It also contains a map (Exhibit 11) showing the locations of all stations for which the data tables are presented.

This series is an update and revision of a similar series published between 1959-1961. Similar data for earlier years were included in the 1941 U.S. DEPARTMENT OF AGRICULTURE YEARBOOK, Climate and Man, in a section entitled, "Climates of the United States."

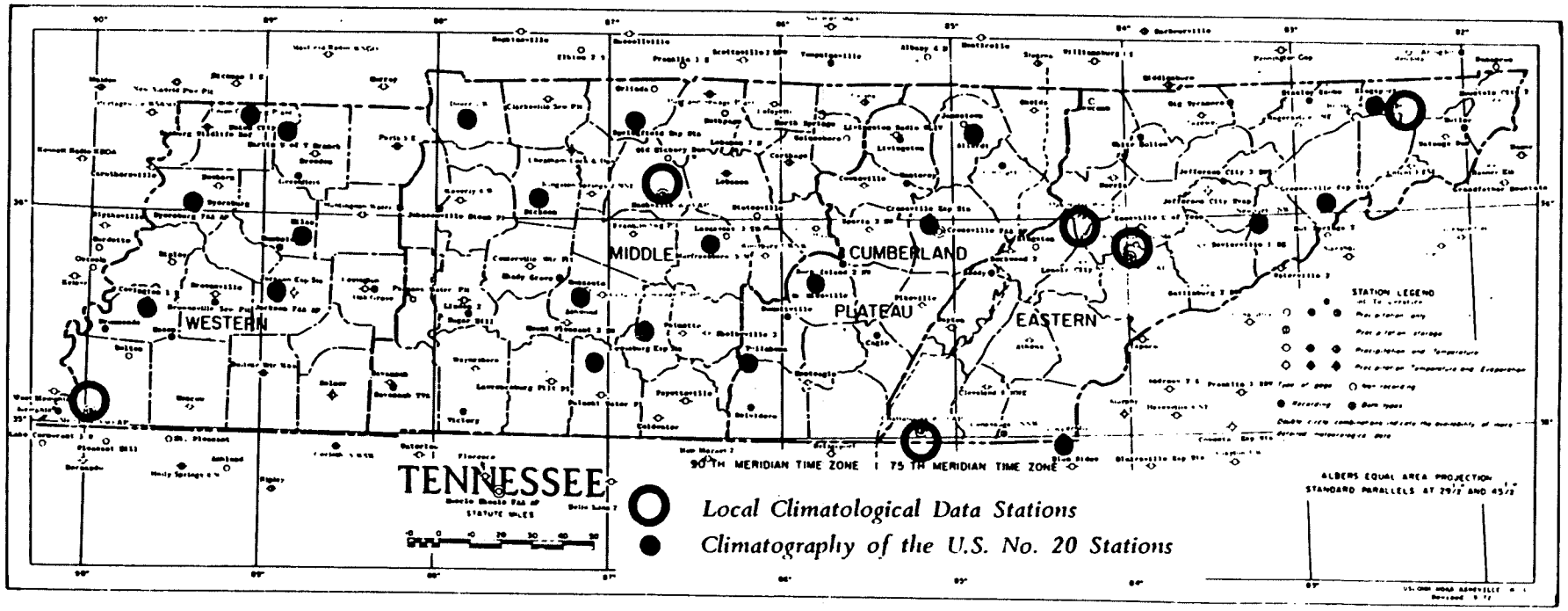
EXHIBIT 10

NASHVILLE, TN **METROPOLITIAN AIRPORT** **CENTRAL** **36° 07' N** **86° 41' W** **590 FT** **1975**

Month	Temperatures °F: Normal: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	Normal Degree days Base 65 °F: Heating	Cooling	Precipitation in inches: Water equivalent: Normal	Maximum monthly	Year	Minimum monthly	Year	Maximum in 24 hrs.	Year	Snow, ice pellets: Maximum monthly	Year	Maximum in 24 hrs.	Year	Relative humidity pct. (Local time): Hour 00	Hour 06	Hour 12	Hour 18	Wind: Mean speed m.p.h.	Prevailing direction	Fastest mile: Speed m.p.h.	Direction	Year	Pct. of possible sunshine	Mean sky cover, tenths, sunrise to sunset	Mean number of days: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, ice pellets 1.0 inch or more	Thunderstorms	Heavy fog, visibility ¼ mile or less	Temperatures °F: (b) Max 90° and above	32° and below	Min. 32° and below	0° and below	Average station pressure mb. Elev. 609 feet m.s.l.
(a)				10		1	10				36		36		36		36		36		10	10	10	10						33	35												
JL	47.6	29.0	38.3	78	1972	-6	1966	828	0	4.75	13.92	1950	1.16	1970	4.40	1946	18.8	1948	7.5	1966	75	81	66	67	9.2	S	36	SW	1949	40	7.2	6	9	15	11	1	2	3	0	5	21	1	998.2
F	50.9	31.0	41.0	79	1972	-5	1971	672	0	4.43	10.31	1958	0.64	1968	4.04	1948	15.0	1960	7.4	1960	74	80	60	61	9.4	S	32	NW	1962	47	6.7	7	6	15	11	1	2	3	1	3	17	0	996.3
A	59.2	38.1	48.7	86	1967	14	1968	524	19	5.00	12.35	1975	1.39	1966	4.66	1979	16.1	1960	8.8	1951	72	79	54	55	10.0	S	70	NW	1933	52	6.6	7	8	14	12	1	3	1	0	2	10	0	993.1
M	71.2	48.8	60.1	88	1965	24	1973	178	29	4.11	7.00	1973	1.13	1948	3.25	1962	1.1	1971	1.1	1971	73	81	52	54	9.6	S	61	W	1958	59	6.1	8	9	13	11	*	1	1	0	0	2	0	994.7
M	79.8	57.3	68.5	91	1974	35	1971	45	193	4.10	8.23	1957	0.69	1961	3.57	1944	0.0		0.0		83	87	58	59	7.6	S	43	SW	1961	62	5.9	9	10	12	10	*	1	1	0	0	0	0	992.1
J	87.5	65.7	76.6	98	1971	42	1966	0	348	3.38	9.37	1960	0.78	1952	4.91	1960	0.0		0.0		84	88	55	59	7.0	S	73	NW	1953	67	5.6	8	13	9	9	0	0	1	1	0	0	0	993.8
J	90.2	69.0	79.6	103	1966	54	1972	0	453	3.83	7.79	1950	0.71	1954	3.56	1950	0.0		0.0		87	91	59	64	6.4	S	52	NW	1963	64	5.7	8	13	10	10	0	10	1	15	0	0	0	994.5
A	89.2	67.7	78.5	99	1968	51	1967	0	419	3.24	8.31	1962	0.69	1968	5.34	1963	0.0		0.0		88	92	61	66	6.1	S	45	NW	1956	66	5.3	10	12	9	9	0	0	0	10	0	0	0	996.8
S	83.5	60.5	72.0	95	1973	37	1967	10	220	3.09	10.46	1976	0.28	1956	5.09	1962	0.0		0.0		86	91	61	67	6.4	S	42	NW	1952	63	5.2	11	8	11	8	0	0	0	4	0	0	0	0	996.2
O	73.2	48.6	60.9	90	1971	27	1968	180	93	2.16	6.13	1959	T	1963	3.79	1973	T	1956	T	1954	82	87	58	62	6.3	S	38	NW	1955	64	4.8	13	9	7	7	0	0	0	2	0	0	1	0	999.0
N	59.0	37.7	48.4	84	1971	12	1970	498	0	3.46	9.84	1963	0.54	1949	3.76	1973	9.2	1950	9.2	1950	77	81	60	66	8.4	S	43	SE	1947	50	6.0	9	7	6	9	0	0	0	2	0	0	0	0	998.0
D	49.6	31.1	40.4	74	1971	6	1968	763	0	4.45	10.86	1951	1.01	1965	3.88	1951	13.2	1969	10.2	1963	77	81	66	68	8.8	S	47	W	1946	40	6.8	7	7	7	11	1	1	2	0	1	16	0	997.3
YR	70.1	48.7	59.4	103	JUL 1966	-6	JAN 1966	3696	1694	48.00	13.92	JAN 1950	T	OCT 1969	5.34	AUG 1969	18.8	JAN 1948	10.2	DEC 1963	80	85	59	62	7.9	S	73	NW	JUN 1953	57	6.0	103	108	134	119	4	56	17	38	8	74	1	993.8

Means and extremes above are from existing and comparable exposures. Annual extremes have been exceeded at other sites in the locality as follows: Highest temperature 107 in July 1952; lowest temperature -15 in January 1963 and earlier; maximum monthly precipitation 14.75 in January 1937; maximum precipitation in 24 hours 6.05 in November 1900; maximum monthly snowfall 21.5 in March 1892; maximum snowfall in 24 hours 17.0 in March 1892.

EXHIBIT 11



CLIMATOGRAPHY OF THE UNITED STATES NO. 81, Monthly Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1951-80. This publication, issued for each state and for Puerto Rico, U.S. Virgin Islands, and the Pacific Islands combined (53 separate publications), contains monthly and annual normals of these four elements (Exhibits 12, 13, 14, and 15) for all NWS stations in the state and for all Cooperative Climatological Stations in the state which have adequate records and a minimum of station moves during this 30-year period. Also included are separate listings showing the latitude, longitude, and elevation for each station that reports temperature and for those stations that report precipitation (Exhibit 16) and a map showing the locations of all stations for which normals are published (Exhibit 17).

NORTH DAKOTA

EXHIBIT 12

TEMPERATURE NORMALS (DEG F)

STATION		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALMONT 7 W	MAX	19.6	26.7	36.7	53.9	67.9	76.5	84.3	83.5	71.6	59.5	39.8	27.5	54.0
	MIN	.1	7.2	16.4	30.4	42.2	52.2	57.4	55.4	45.0	35.0	19.8	8.4	30.8
	MEAN	9.9	17.0	26.6	42.2	55.1	64.4	70.9	69.5	58.3	47.3	29.8	17.9	42.4
AMENIA	MAX	15.3	23.0	35.4	54.6	70.1	78.5	84.0	83.1	72.6	60.0	38.6	22.8	53.2
	MIN	-5.4	1.9	15.5	31.6	42.9	52.6	57.2	55.3	45.3	34.9	19.4	3.5	29.6
	MEAN	5.0	12.4	25.5	43.1	56.5	65.6	70.6	69.2	59.0	47.5	29.0	13.2	41.4
AMIDON	MAX	22.6	29.0	37.4	52.3	65.5	74.4	83.0	82.7	70.5	59.0	40.3	30.1	53.9
	MIN	1.5	8.6	16.6	29.6	40.5	50.3	55.8	53.9	43.5	33.1	19.6	9.0	30.2
	MEAN	12.1	18.8	27.0	41.0	53.0	62.4	69.4	68.4	57.0	46.1	30.0	19.6	42.1

NORTH DAKOTA

EXHIBIT 13

PRECIPITATION NORMALS (INCHES)

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ADAMS 7 SSW	.71	.39	.76	1.39	2.20	3.20	2.89	2.33	1.74	1.07	.62	.50	17.80
ALMONT 7 W	.42	.37	.60	1.69	2.28	3.48	2.14	2.25	1.39	.74	.44	.36	16.16
AMBROSE 3 N	.32	.31	.39	1.17	2.06	2.76	1.93	2.32	1.80	.76	.36	.36	14.54
AMENIA	.37	.37	.73	2.02	2.67	3.66	3.04	2.67	2.07	1.31	.66	.48	20.05
AMIDON	.37	.37	.54	1.53	2.54	3.85	2.23	1.49	1.41	.74	.42	.39	15.88
ASHLEY	.37	.38	.70	1.51	2.69	3.61	2.51	2.24	1.54	.95	.41	.36	17.27
BELCOURT INDIAN RES	.49	.43	.67	1.36	2.43	3.18	2.95	3.09	1.94	.87	.47	.49	18.37

NORTH DAKOTA

EXHIBIT 14

HEATING DEGREE DAY NORMALS (BASE 65 DEG F)

STATION	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	ANN
ALMONT 7 W	23	49	239	549	1056	1460	1708	1344	1190	684	317	107	8726
AMENIA	16	33	208	543	1080	1606	1860	1473	1225	657	289	77	9067
AMIDON	32	55	275	586	1050	1407	1640	1294	1178	720	381	141	8759
ASHLEY	33	47	252	577	1092	1544	1795	1434	1243	696	345	115	9173
BELCOURT INDIAN RES	73	115	370	704	1230	1724	1996	1586	1423	816	438	166	10643
BISMARCK WSO //R	18	57	255	586	1092	1538	1807	1414	1209	675	324	100	9075
BOTTINEAU	51	94	335	685	1233	1736	2021	1613	1417	783	398	138	10504

EXHIBIT 15

COOLING DEGREE DAY NORMALS (BASE 65 DEG F)

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALMONT 7 W	0	0	0	0	10	89	206	188	38	0	0	0	531
AMENIA	0	0	0	0	25	95	190	163	28	0	0	0	501
AMIDON	0	0	0	0	9	63	169	160	35	0	0	0	436
ASHLEY	0	0	0	0	10	79	175	147	27	0	0	0	438
BELCOURT INDIAN RES	0	0	0	0	10	31	92	78	7	0	0	0	218
BISMARCK WSO //R	0	0	0	0	10	79	186	174	24	0	0	0	473
BOTTINEAU	0	0	0	0	7	51	125	115	11	0	0	0	319
BOWBELLS	0	0	0	0	10	45	132	112	15	0	0	0	314
BOWMAN COURT HOUSE	0	0	0	0	8	71	185	163	31	0	0	0	458
BUTTE	0	0	0	0	21	81	185	160	30	0	0	0	477

EXHIBIT 16

32 — NORTH DAKOTA

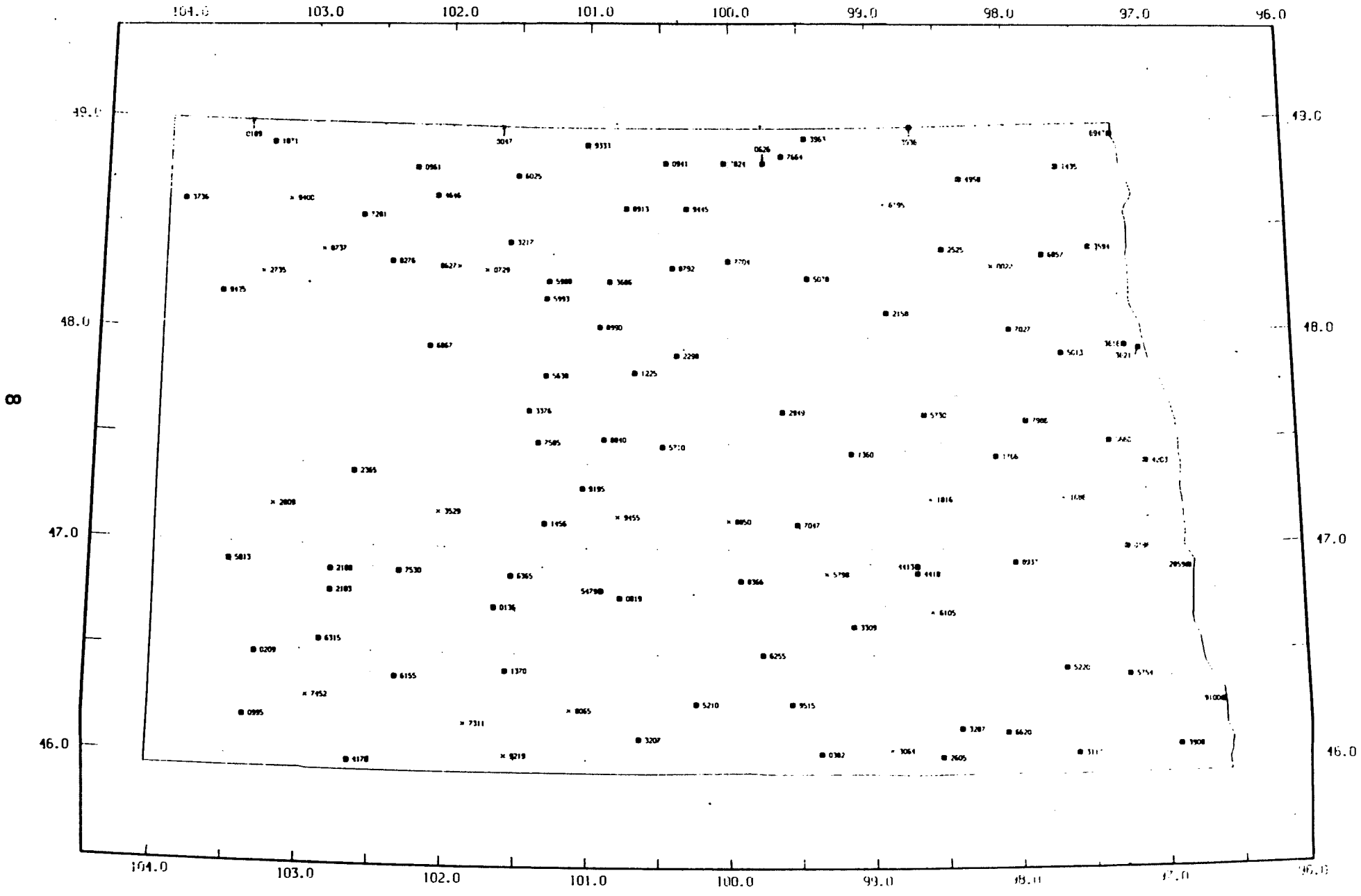
LEGEND
11 = TEMPERATURE ONLY
12 = PRECIPITATION ONLY
13 = TEMP. & PRECIP

STATE-STATION NUMBER	STN TYP	NAME	LATITUDE DEG-MIN	LONGITUDE DEG-MIN	ELEVATION (FT)
32-0022	12	ADAMS 7 SSW	N 4820	W 09807	1554
32-0136	13	ALMONT 7 W	N 4643	W 10139	2300
32-0189	12	AMBROSE 3 N	N 4900	W 10328	2027
32-0196	13	AMENIA	N 4700	W 09713	954
32-0209	13	AMIDON	N 4629	W 10319	2910
32-0382	13	ASHLEY	N 4602	W 09922	2001
32-0626	13	BELCOURT INDIAN RES	N 4850	W 09945	1960
32-0729	12	BERTHOLD	N 4819	W 10144	2080
32-0819	13	BISMARCK WSO //R	N 4646	W 10046	1647
32-0941	13	BOTTINEAU	N 4850	W 10027	1640
32-0961	13	BOWBELLS	N 4848	W 10215	1958
32-0995	13	BOWMAN COURT HOUSE	N 4611	W 10323	2980
32-1225	13	BUTTE	N 4750	W 10040	1740
32-1360	13	CARRINGTON	N 4727	W 09908	1586
32-1370	13	CARSON	N 4625	W 10134	2310
32-1435	13	CAVALIER	N 4848	W 09738	890
32-1456	13	CENTER	N 4707	W 10118	2100
32-1686	12	COLGATE	N 4714	W 09739	1180
32-1766	13	COOPERSTOWN	N 4726	W 09807	1428
32-1816	12	COURTENAY 1 NW	N 4714	W 09835	1515
32-1871	13	CROSBY	N 4854	W 10318	1952
32-2158	13	DEVILS LAKE KDLR	N 4807	W 09852	1464
32-2183	13	DICKINSON FAA AIRPORT //R	N 4647	W 10248	2585
32-2188	13	DICKINSON EXP STATION	N 4653	W 10248	2460
32-2298	13	DRAKE	N 4755	W 10022	1636

EXHIBIT 17

32 – NORTH DAKOTA

LEGEND
O = TEMPERATURE ONLY
× = PRECIPITATION ONLY
⊗ = TEMPERATURE & PRECIPITATION



CLIMATOGRAPHY OF THE UNITED STATES NO. 84, Daily Normals of Temperature and Heating and Cooling Degree Days and Precipitation 1951-80. Daily normals for these elements (Exhibit 18) have been published for 344 cities in the United States. This series is a revision of similar published data that listed the daily normals based on the 30-year periods 1921-50, 1931-60, and 1941-70. These earlier issues did not contain precipitation normals. Heating and cooling degree day normals were added with the 1941-70 issue.

EXHIBIT 18

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS AND PRECIPITATION 1951-80

124259 INDIANAPOLIS WSO — LATITUDE: 39 44N — LONGITUDE: 086 16W — ELEVATION 792 FT

	DECEMBER						JANUARY						FEBRUARY					
	TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY	
DAILY	MAX	MIN	AVG	HDD	CDD	PRECIP	MAX	MIN	AVG	HDD	CDD	PRECIP	MAX	MIN	AVG	HDD	CDD	PRECIP
1	44	28	36	29	0	10	35	20	27	38	0	09	35	18	27	38	0	08
2	44	28	36	29	0	10	35	19	27	38	0	09	35	18	27	38	0	08
3	43	27	35	30	0	10	35	19	27	38	0	09	36	18	27	38	0	08
4	43	27	35	30	0	10	34	19	27	38	0	09	36	19	27	38	0	08
5	42	27	35	30	0	10	34	19	27	39	0	09	36	19	27	38	0	08
6	42	26	34	31	0	10	34	18	26	39	0	09	36	19	28	37	0	08
7	42	26	34	31	0	10	34	18	26	39	0	09	36	19	28	37	0	08
8	41	26	34	31	0	10	34	18	26	39	0	09	37	19	28	37	0	08
9	41	26	33	32	0	10	34	18	26	39	0	09	37	20	28	37	0	08
10	41	25	33	32	0	10	34	18	26	39	0	09	37	20	29	36	0	08
11	40	25	33	32	0	10	34	18	26	39	0	09	37	20	29	36	0	08
12	40	25	32	33	0	10	34	18	26	39	0	09	38	20	29	36	0	09
13	40	24	32	33	0	10	34	18	26	39	0	09	38	20	29	36	0	09
14	40	24	32	33	0	10	34	17	26	39	0	09	38	21	30	35	0	09
15	39	24	32	33	0	10	34	17	26	39	0	09	38	21	30	35	0	09
16	39	24	31	34	0	10	34	17	25	40	0	09	39	21	30	35	0	09
17	39	23	31	34	0	10	34	17	25	40	0	09	39	22	30	35	0	09
18	39	23	31	34	0	10	34	17	25	40	0	08	39	22	31	34	0	09
19	38	23	31	34	0	10	34	17	25	40	0	08	40	22	31	34	0	09
20	38	23	30	35	0	10	34	17	25	40	0	08	40	22	31	34	0	09
21	38	22	30	35	0	10	34	17	25	40	0	08	40	23	32	33	0	09
22	37	22	30	35	0	09	34	17	26	39	0	08	40	23	32	33	0	09
23	37	22	29	36	0	09	34	17	26	39	0	08	41	23	32	33	0	09
24	37	22	29	36	0	09	34	17	26	39	0	08	41	24	32	33	0	10
25	37	21	29	36	0	09	34	17	26	39	0	08	42	24	33	32	0	10
26	36	21	29	36	0	09	34	18	26	39	0	08	42	24	33	32	0	10
27	36	21	28	37	0	09	34	18	26	39	0	08	42	25	33	32	0	10
28	36	20	28	37	0	09	34	18	26	39	0	08	43	25	34	31	0	10
29	36	20	28	37	0	09	35	18	26	39	0	08						
30	36	20	28	37	0	09	35	18	26	39	0	08						
31	35	20	28	37	0	09 *	35	18	27	38	0	08 *						
MONTHLY	39.2	23.7	31.5	1039	0	3.00	34.2	17.8	26.0	1209	0	2.65	38.5	21.1	29.9	983	0	2.46
WINTER	37.3	20.9	29.2	3231	0	8.11						ANNUAL	62.0	42.2	52.1	5650	988	39.12

NOTES

DEGREE DAYS BASE TEMPERATURE - 65 DEG F: TEMPERATURE UNITS = DEG F: PRECIPITATION UNITS = INCHES: * = LESS THAN 1 BUT GREATER THAN 0

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED DAILY VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY AND PRECIPITATION MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

CLIMATOGRAPHY OF THE UNITED STATES NO. 85, Divisional Normals and Standard Deviations of Temperature, Precipitation, Heating and Cooling Degree Days, 1931-80. This two-volume set for the U.S. contains monthly and annual normals and standard deviations of temperature (Exhibit 19), precipitation (Exhibit 20), and heating degree days and cooling degree days (Exhibits 21 and 22) for the period 1931-60, 1941-70, and 1951-80. For the 50-year period 1931-80, divisional averages and standard deviations are also presented. A climatic division is a geographical area in a state which represents, as nearly as possible, a homogeneous climatic regime. A U.S. map depicting the divisions is included at the end of both volumes of the set. Sequential tables of monthly and annual data from 1931-80, as well as the normals, are available on microfiche (Exhibit 23).

DIVISIONAL NORMALS AND STANDARD DEVIATIONS — EXHIBIT 19
TEMPERTURE (DEG F)

NORTH CAROLINA

DIVISIONS		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
SOUTHERN MOUNTAINS														
01	1931 80 AVERAGE	38.1	39.5	46.4	55.2	63.0	69.8	72.7	72.0	66.7	56.4	46.3	39.4	55.5
	STD DV	5.4	4.3	4.0	2.2	2.2	2.0	1.4	1.3	2.2	2.5	2.7	3.9	.9
	1931-60 NORMAL	39.5	40.5	46.0	55.2	63.3	70.5	73.0	72.2	66.9	57.0	46 1	39.5	55.8
	STD DV	5.2	4 3	4.4	2.3	2.1	1.9	1.3	1.3	2.0	2.5	2 8	4.0	.8
	1941 70 NORMAL	38.0	39.6	45.8	55.7	63.3	69.9	72.6	71.9	66.2	56.5	45.9	38.6	55.3
	STD DV	4.5	4.5	4.2	2.5	2.4	2.0	1.4	1.4	2.1	2.7	2.6	3.6	.9
	1951-80 NORMAL	36.6	38.9	46.2	55.4	62.9	69.2	72.6	72.0	66.6	55.8	46.1	38.9	55.1
	STD DV	4.6	4.3	3.7	2.2	2.5	2.0	1.4	1.3	2.1	2.4	2.6	3.7	.8
NORTHERN MOUNTAINS														
02	1931-80 AVERAGE	35.6	36 9	43 9	53.1	61.1	67.9	71.0	70.2	64.7	54.6	44.5	37.2	53.4
	STD DV	5.2	4 2	4.2	2.3	2.2	1.9	1.6	1.5	2.3	2.4	2.6	3.8	.9
	1931-60 NORMAL	36.8	37 8	43.2	52.7	61.0	68.2	70.9	69.9	64.5	54.9	44.1	37.2	53.4
	STD DV	5.1	4 3	4.7	2.2	2.0	2.1	1.7	1.5	2.2	2.3	2.6	4.0	1.0
	1941-70 NORMAL	35.5	36 9	43.3	53.4	61.3	67.8	70.7	69.8	64.0	54.6	44.2	36.3	53.2
	STD DV	4.2	4.2	4.5	2.6	2.4	2.0	1.6	1.5	2.1	2.3	2.5	3.6	.8
	1951-80 NORMAL	34.4	36 4	43.9	53.5	61.3	67.6	71.1	70.5	64.6	54.1	44.6	36.9	53.2
	STD DV	4.4	4 0	3.9	2.4	2.5	2.0	1.4	1.4	2.1	2.4	2.7	3.7	.7

DIVISIONAL NORMALS AND STANDARD DEVIATIONS — EXHIBIT 20
PRECIPITATATION (INCHES)

NORTH DAKOTA

DIVISIONS		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
NORTHWEST														
01	1931-80 AVERAGE	44	.43	58	1.28	2.04	3.27	2.18	1.88	1.51	.84	.49	.43	15.37
	STD DV	.25	30	.34	87	1.30	1.64	.98	1.00	1.23	.71	.38	.24	3.76
	1931-60 NORMAL	.42	40	61	1 03	1.80	3 43	2.13	1.85	1.29	.77	.55	.37	14.64
	STD DV	.21	.27	.37	65	1.01	1.84	.98	.78	1.22	.61	.44	.24	3.63
	1941-70 NORMAL	.46	.43	.55	1.26	2.01	3 61	2.21	2.02	1.45	.81	.50	.41	15 72
	STD DV	.27	.31	.39	86	1.30	1.94	1.03	1.05	1.25	.62	.41	.23	3.64
	1951-80 NORMAL	47	.44	.53	1.43	2.16	3.13	2.06	1.94	1.79	.90	.45	.45	15.75
	STD DV	.27	.33	.38	.97	1.49	1.49	.95	1.12	1.38	.76	.33	.23	3.79
NORTH CENTRAL														
02	1931-80 AVERAGE	.49	.42	.67	1 24	2.04	3.27	2.59	2.34	1.60	.87	.52	.48	16.53
	STD DV	.29	.30	.48	90	1.13	1.70	1.15	1.33	1.28	.80	.40	.29	3.58
	1931-60 NORMAL	.51	.40	.71	1 03	1.96	3.54	2.50	2.31	1.34	.83	.60	.43	16.16
	STD DV	.26	.27	.51	71	1.08	1.90	1.22	1.05	1.21	.76	.44	.30	3.79
	1941-70 NORMAL	.53	.39	.70	1.23	2 18	3.52	2.56	2.49	1.54	.83	.56	.45	16.98
	STD DV	.33	.29	53	88	1.12	1.94	1.11	1.39	1.32	.69	.44	.27	3.23
	1951-80 NORMAL	.49	.41	.61	1 33	2.11	3.19	2.49	2.51	1.82	.89	.48	.48	16.81
	STD DV	.29	.32	.42	1.03	1.21	1.74	1.03	1.56	1.26	.83	.36	.27	3.25

DIVISIONAL NORMALS AND STANDARD DEVIATIONS — EXHIBIT 21
HEATING DEGREE DAYS (BASE 65 DEG F)

NORTH CAROLINA

DIVISIONS		JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	ANN
SOUTHERN MOUNTAINS														
01	1931-80 AVERAGE	0	0	48	275	561	794	838	713	582	295	110	15	4231
	STD DV	1	0	27	70	82	120	162	120	119	62	43	13	295
	1931-60 NORMAL	0	0	46	259	568	789	794	685	594	297	104	11	4147
	STD DV	0	0	24	69	84	125	155	119	129	64	42	12	290
	1941-70 NORMAL	0	0	55	273	573	818	840	711	597	283	105	14	4269
	STD DV	1	0	28	73	78	112	133	127	125	72	46	13	302
	1951-80 NORMAL	0	0	50	292	567	807	881	731	586	290	114	19	4337
	STD DV	1	0	28	67	79	115	140	120	112	62	48	15	268
NORTHERN MOUNTAINS														
02	1931-80 AVERAGE	3	0	80	326	614	862	911	786	657	358	148	26	4775
	STD DV	7	0	35	69	79	118	158	119	128	66	49	19	277
	1931-60 NORMAL	4	0	83	318	627	862	875	762	679	369	151	24	4759
	STD DV	8	0	35	69	79	123	155	120	141	64	47	20	306
	1941-70 NORMAL	4	0	91	324	624	889	915	787	675	351	147	27	4838
	STD DV	8	0	34	68	75	113	126	117	137	76	55	20	250
	1951-80 NORMAL				339	613	871	950	800	657	346	146	30	4836
	STD DV					80	114				69	56	21	245

DIVISIONAL NORMALS AND STANDARD DEVIATIONS — EXHIBIT 22
COOLING DEGREE DAYS (BASE 65 DEG F)

NORTH CAROLINA

DIVISIONS		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
SOUTHERN MOUNTAINS														
01	1931-80 AVERAGE	3	0	4	2	49	160	239	216	101	9	0	0	783
	STD DV	7	0	6	4	28	48	44	40	38	10	0	0	115
	1931-60 NORMAL	4	0	4	2	52	177	248	222	102	11	0	0	822
	STD DV	8	0	7	4	26	47	39	40	36	11	0	0	83
	1941-70 NORMAL	3	0	3	2	52	163	235	213	91	9	0	0	771
	STD DV	7	0	7	4	30	49	41	44	35	12	0	0	108
	1951-80 NORMAL	2	0	3	2	48	146	235	217	98	6	0	0	757
	STD DV	5	0	5	3	31	48	44	40	37	8	0	0	122
NORTHERN MOUNTAINS														
02	1931-80 AVERAGE	1	0	3	0	29	115	190	166	70	3	0	0	577
	STD DV	4	0	5	1	21	40	44	40	33	5	0	0	110
	1931-60 NORMAL	2	0	2	0	27	121	186	159	67	3	0	0	567
	STD DV	4	0	5	0	17	44	45	41	33	5	0	0	110
	1941-70 NORMAL	1	0	2	0	30	113	181	157	60	3	0	0	547
	STD DV	3	0	4	1	23	42	41	41	29	5	0	0	99
	1951-80 NORMAL	0	0	1	0	31	108	192	174	69	2	0	0	578
	STD DV	3	0	4	3	24	40	39	39	31	4	0	0	104
NORTHERN PIEDMONT														
03	1931-80 AVERAGE	4			11	123	289	390	357	191	34	0	0	1413
	STD DV	7			11	50	65	53	43	58	24	1	1	184
	1931-60 NORMAL	5			14	137	321	407	369	203	41	0	0	1513
	STD DV	8			13	46	56	52	38	56	25	2	2	140
	1941-70 NORMAL	3			14	131	293	390	351	182	36	0	0	1412
	STD DV	7			12			51	41	55	26	1		
		3							351	178	27			

SAMPLE DATA ON MICROFICHE

EXHIBIT 23

January 1931 - December 1980

STATE: 1 ALABAMA
DIVISION: 1 NORTHERN VALLEY

DIVISIONAL HEATING DEGREE DAYS (BASE 65 DEG F)

ST/DIV		SEASON	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	ANNUAL
1	1	30-31							762	552	618	206	72	0	
1	1	31-32	0	0	0	99	249	447	531	377	556	131	40	0	2430
1	1	32-33	0	0	16	209	549	672	550	607	457	181	10	0	3253
1	1	33-34	0	0	0	138	397	387	597	677	471	120	21	0	2808
1	1	34-35	0	0	12	116	318	697	674	539	228	131	25	0	2740
1	1	35-36	0	0	10	121	380	864	809	711	309	196	13	0	3413
1	1	36-37	0	0	0	134	477	561	442	582	490	137	22	0	2841
1	1	37-38	0	0	14	200	471	697	654	375	228	109	19	0	2766
1	1	38-39	0	0	10	99	365	654	600	476	320	171	32	0	2727
1	1	39-40	0	0	0	96	492	613	1169	649	446	174	74	0	3712
1	1	40-41	0	0	20	129	444	529	698	716	597	87	14	0	3234
1	1	41-42	0	0	0	43	465	592	819	708	411	100	28	0	3165
1	1	42-43	0	0	24	139	334	679	674	534	516	155	15	0	3065
1	1	43-44				207	504	713	724	452	416	176	16	0	
1	1	44					414	775	762	536	216	105	71		
1									700	526	257	83			
															3326
		56-57	0	0	29	126								0	2939
1	1	57-58	0	0	16	257	406						38	0	3808

REQUESTS FOR MICROFICHE COPIES OF THIS REPORT SHOULD BE ADDRESSED TO:

DIRECTOR
NATIONAL CLIMATIC DATA CENTER
FEDERAL BUILDING
ASHEVILLE, NC 28801

(704) 259-0682
(FTS 672-0682)

THE REQUESTED MICROFICHE WILL BE PROVIDED AT COST.

STATE: 1 ALABAMA
DIVISION: 1 NORTHERN VALLEY

DIVISIONAL HEATING DEGREE DAYS (BASE 65 DEG F)

ST/DIV		SEASON	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	ANNUAL
1	1	71-72	0	0	11	79	435	458	645	602	427	135	53	8	2853
1	1	72-73	0	0	7	191	540	632	812	652	282	222	88	0	3426
1	1	73-74	0	0	6	98	296	672	539	582	284	164	31	17	2689
1	1	74-75	0	0	57	225	441	682	631	534	507	209	25	0	3311
1	1	75-76	0	0	52	165	400	691	877	427	327	162	120	9	3230
1	1	76-77	0	0	37	311	672	796	1140	644	342	91	20	0	4053
1	1	77-78	0	0	11	242	363	753	1078	896	550	120	56	0	4069
1	1	78-79	0	0	7	223	259	669	998	733	405	162	64	8	3528
1	1	79-80	0	0	32	189	474	700	736	784	559	217	47	0	3738
1	1	80-81	0	0	7	257	474	744							
31-80 AVERAGE			0	0	17	164	435	670	749	596	445	147	42	2	3267*
31-80 STD DV			0	0	14	62	88	120	168	131	125	50	28	4	341*
NO. YEARS			50	50	50	50	50	50	50	50	50	50	50	50	50
31-60 NORMAL			0	0	13	147	435	654	695	562	444	144	34	1	3129*
31-60 STD DV			0	0	10	59	83	175	158	125	133	47	24	3	318*
NO. YEARS			30	30	30	30	30	30	30	30	30	30	30	30	30
41-70 NORMAL			0	0	17	163	442	687	747	592	463	138	38	1	3288*
41-70 STD DV			0	0	13	60	78	120	137	133	125	55	25	4	314*
NO. YEARS			30	30	30	30	30	30	30	30	30	30	30	30	30
51-80 NORMAL			0	0	19	184	446	687	797	616	460	150	47	3	3405*
51-80 STD DV			0	0	16	61	87	115	147	138	119	53	30	5	314*
NO. YEARS			30	30	30	30	30	30	30	30	30	30	30	30	30

NOTES:
1. STANDARD DEVIATIONS (STD DV) OF TEMPERATURE FOR THE PERIOD 1931-80 WERE USED TO COMPUTE ALL HEATING DEGREE DAY VALUES.
2. ASTERISK INDICATES CALENDAR YEAR (JANUARY-DECEMBER) ANNUAL VALUES.

CLIMATOGRAPHY OF THE UNITED STATES NO. 90, Airport Climatological Summary. This publication, intended mainly as an aid to aviation, is being prepared for 170 airports for which Local Climatological Data is published. It is based upon the ten-year period 1965-74. It contains "Capsule Summary of Aviation Weather" (Exhibit 24); a table of monthly and annual means and extremes (Exhibit 25); sequential tables of monthly and annual values of average daily maximum and minimum temperature, monthly average temperature, total precipitation, total snowfall, total heating degree days, and total cooling degree days (Exhibit 26); and flying weather statistics (Exhibit 27). It also includes, based upon eight observations per day, monthly and annual percentage frequencies for ceiling, visibility, and weather conditions by wind direction, and for wind direction versus wind speed for both All Weather and Instrument Flight Rules (IFR) conditions. Tables showing the mean number of days with various weather conditions (Exhibit 28) for each of the eight observational times (00, 03,...21 GMT, expressed in LST) and the recent station location history (Exhibit 29) are also included.

This publication is a revision of the CLIMATOGRAPHY OF THE UNITED STATES NO. 82, Summary of Hourly Observations, issued in the early 1960's and which contains data summaries based upon 24 observations per day.

CAPSULE SUMMARY OF AVIATION WEATHER

EXHIBIT 24

Flying Weather (Table 9): Ceiling less than 1500 feet and/or visibility less than 3 miles.

-- Month (all hours) with greatest percent frequency of occurrence: January (26.0%)

-- Month (all hours) with lowest percent frequency of occurrence: October (7.2%)

-- 3-hourly observation time (annual) with greatest percent frequency of occurrence: 1000 (18.8%)

-- 3-hourly observation time (annual) with lowest percent frequency of occurrence: 2200 (10.9%)

Ceiling, Visibility, and Weather by Wind Direction (Table 10 - Annual):

-- Percent frequency of ceilings over 9500 feet (10,000 feet or greater): 50.0%

-- Prevailing surface wind direction with ceiling over 9500 feet and percent frequency of occurrence: S (13.6%)

-- Percent frequency of visibilities over 6 miles (7 miles or greater): 69.2%

-- Prevailing surface wind direction with visibility over 6 miles and percent frequency of occurrence: S (15.6%)

Wind Direction vs. Wind Speed (Table 11 - Annual):

All Weather - Table A (percent frequency of all observations):

-- Prevailing wind direction: S (20.8%) wind speed (all directions) greater than 16 knots: 10.6%

IFR (Instrument Flight Rules) - Table B (percent frequency of IFR observations):

-- Prevailing wind direction: W (17.6%) wind speed (all directions) greater than 16 knots: 13.0%
(17.6% = percent frequency from W direction x 100% ÷ total IFR percent frequency)

Weather Condition by Hour (Table 12 - Annual):

-- Time of day with most obstructions to vision and mean number of days with visibility less than 7 miles at this hour: 1000 (117.8 days)

-- Time of day with least obstructions to vision and mean number of days with visibility less than 7 miles at this hour: 0100 (65.7 days)

TABLE 1. MEANS AND EXTREMES FOR PERIOD 1965 - 1974

ERIE, PA
ERIE INTL AP

LATITUDE 4205N LONGITUDE 0801W TIME ZONE : EASTERN ELEVATION 731 FT

MONTH	TEMPERATURE (°F)					PRECIPITATION (INCHES)								MEAN						PRESSURE ALTITUDE (FT)		SURFACE WIND			MEAN SKY COVER (%)
	MEAN			EXTREME		TOTAL				SNOWFALL				RELATIVE HUMIDITY (%) LST				VAPOR PRESSURE (IN. OF HG)	DEW PT (°F)			PVLG DIR (16 PT)	SPEED (KT)		
	DAILY MAX	DAILY MIN	MONTHLY	MAX	MIN	MEAN	MAX	MIN	GREATEST DAILY	MEAN	MAX	GREATEST DAILY	MEAN DEPTH	01	07	13	19			MEAN	99.95% LEVEL		MEAN	MAX	
JAN	32	19	26	64	-13	2.2	3.9	.9	.8	21	30	9	3	74	75	71	73	.11	18	650	1450	S	12.1	35+	85
FEB	32	17	25	62	-12	1.9	3.0	.7	1.2	18	39	9	2	75	77	70	74	.11	17	600	1400	S	11.2	45+	76
MAR	41	24	34	79	0	2.7	5.0	1.4	1.8	13	27	12	1	75	77	67	71	.15	25	650	1550	S	10.4	39+	72
APR	54	34	45	80	17	3.3	5.3	1.7	1.5	2	9	2	0	73	74	61	63	.21	33	600	1450	S	10.4	40+	66
MAY	63	45	54	87	26	3.6	5.5	2.6	2.2	0	1	1	0	70	76	63	63	.30	43	600	1250	S	9.3	29+	63
JUN	74	54	65	91	32	4.2	7.5	2.5	1.8	0	0	0	0	79	79	64	64	.45	55	750	1100	S	8.7	32+	57
JUL	78	60	69	94	46	3.2	7.7	1.1	2.8	0	0	0	0	80	80	63	64	.52	59	600	1000	S	8.1	28+	54
AUG	77	60	68	92	41	3.1	4.5	1.8	1.6	0	0	0	0	83	85	65	68	.52	59	600	1000	S	9.2	30+	51
SEP	71	54	62	89	33	3.0	7.1	2.0	1.8	0	0	0	0	81	84	66	74	.44	54	650	1150	S	8.9	39+	62
OCT	60	44	52	82	26	2.9	3.8	1.6	1.3	0	2	2	0	75	77	64	73	.29	42	650	1200	S	10.3	34+	66
NOV	46	35	40	73	15	4.3	5.3	2.8	1.2	13	34	15	2	77	77	71	75	.20	33	600	1400	S	11.6	34+	88
DEC	38	27	33	68	2	3.3	4.3	2.2	1.5	17	31	9	1	76	77	74	76	.15	25	600	1400	S	11.6	31+	91
ANN	55	40	48	94	-13	36.6	7.7	.7	2.8	85	36	15	1	77	78	67	70	.29	39	600	1350	S	10.1	45+	69

TABLE 1 A. MEAN NUMBER OF DAYS WITH OCCURRENCE OF:

MONTH	PRECIPITATION (INCHES)								FOG		THUNDER-STORMS	HAIL	RAIN	SNOW	ICE PELLETS (SLEET)	GLAZE	DUST STORM VSBY < 5/8 MI	SMOKE OR HAZE	BLOWING SNOW	TEMPERATURE (°F)					
	TOTAL				SNOWFALL															MAX			MIN		
	= OR >				= OR >				< 7 MI VSBY	< 1/4 MI VSBY										= OR >			= OR <		
	.01	.1	.5	1.0	.5	1.0	2.0	4.0												90	65	32	45	32	0
JAN	19	7	1	0	10	7	3	1	11	4	#	0	9	21	1	2	0	14	6	0	0	16	31	28	2
FEB	16	6	1	#	9	6	3	1	9	1	1	#	7	20	1	1	0	13	5	0	0	14	28	26	2
MAR	16	8	1	#	6	4	2	1	13	3	2	#	12	16	1	1	0	14	2	0	2	24	30	25	#
APR	15	#	2	#	2	1	#	0	10	2	3	#	17	6	#	#	0	14	#	0	7	30	25	12	0
MAY	13	9	2	1	0	0	0	0	12	2	5	#	18	1	#	0	0	14	0	0	14	31	16	1	0
JUN	11	8	3	1	0	0	0	0	11	1	6	0	16	0	0	0	0	19	0	1	26	30	2	#	0
JUL	10	5	2	1	0	0	0	0	9	1	7	#	13	0	0	0	0	21	0	#	31	31	0	0	0
AUG	10	7	2	1	0	0	0	0	11	1	7	0	13	0	0	0	0	20	0	#	31	31	1	0	0
SEP	11	8	2	1	0	0	0	0	12	1	4	#	15	0	0	0	0	17	0	0	23	30	5	0	0
OCT	13	8	2	#	#	#	0	0	11	#	2	1	17	3	1	0	0	13	0	0	10	31	18	3	0
NOV	17	11	3	1	4	3	2	1	13	1	3	#	18	11	1	#	0	12	2	0	1	29	28	12	0
DEC	19	9	1	#	8	5	3	1	12	1	1	#	14	18	2	2	0	12	3	0	#	22	31	24	0
ANN	169	92	22	7	40	27	13	5	134	13	39	2	168	94	7	6	0	182	18	1	145	319	214	131	4

NOTES

1. T OR # INDICATES LESS THAN 0.5 DAY, 0.5%, 0.5 OR 0.05 INCH, AS APPLICABLE.
2. TOTAL PRECIPITATION EQUALS RAIN PLUS WATER EQUIVALENT OF SNOW AND ICE PELLETS (SLEET).
3. THE VALUE LISTED UNDER PRESSURE ALTITUDE (FT) 99.95% LEVEL INDICATES VALUE EXCEEDED ONLY 0.05% OF THE TIME.
4. MEAN SNOW DEPTH OBSERVED AT 1200 GMT.
5. SURFACE WIND SPEED MAX IS FASTEST NAUTICAL MILE (THE SPEED OF A NAUTICAL MILE OF WIND OCCURRING IN THE SHORTEST TIME INTERVAL). AN ASTERISK (*) INDICATES PEAK GUST, WHILE A PLUS (+) INDICATES THE FASTEST 1-MINUTE VALUE.
6. ● FOR PREVAILING DIRECTION, NUMBER OF CALMS EXCEEDS NUMBER OF WINDS IN LISTED DIRECTION.

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EXHIBIT 26

TABLE 2. AVERAGE DAILY MAXIMUM TEMPERATURE (°F)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1965	32.7	35.3	35.4	50.1	71.1	74.1	76.5	76.5	74.4	57.7	49.6	41.2	56.2
1966	29.7	32.4	45.6	52.0	60.6	77.1	81.4	77.9	69.1	59.7	50.2	37.6	56.1
1967	29.2	37.1	42.4	56.8	68.1	80.9	76.7	76.8	69.5	61.3	42.0	40.0	56.1
1968	30.6	28.2	44.9	58.1	66.6	76.6	78.8	78.6	73.7	62.7	48.5	36.5	56.3
1969	33.6	32.4	39.0	57.1	66.0	71.1	76.9	78.8	69.8	58.5	43.5	30.5	54.8
1970	34.0	34.3	34.5	54.2	67.4	73.2	77.3	76.9	71.0	59.4	46.1	36.6	56.3
1971	28.7	33.7	37.3	49.3	62.2	76.7	78.5	73.8	70.9	64.5	43.[illegible]	42.6	55.0
1972	33.9	30.3	38.4	48.7	66.4	67.2	76.4	76.4	69.5	53.9	41.5	38.9	53.1
1973	36.0	31.3	50.9	54.1	60.0	76.8	78.5	77.4	71.5	62.5	48.7	36.9	56.9
1974	36.6	31.4	42.7	56.9	67.8	72.3	76.8	76.8	66.8	56.9	47.5	33.0	55.2
MEAN	32.4	31.8	41.1	53.7	63.1	74.0	77.4	76.6	70.6	59.7	46.3	37.6	55.4
MAX	39.2	35.3	50.9	58.1	71.1	80.9	81.4	78.8	74.4	64.5	50.2	42.6	56.9
MIN	34.0	28.2	34.5	48.7	58.1	67.2	76.4	73.8	66.8	53.9	41.5	30.5	53.1

TABLE 3. SNOWFALL (INCHES)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1965	16.8	13.7	26.8	2.2	.0	.0	.0	.0	.0	T	18.4	5.3	83.2
1966	29.9	8.7	17.7	4.8	T	.0	.0	.0	.0	.0	T	31.4	90.7
1967	6.0	13.5	8.8	1.7	T	.0	.0	.0	.0	T	36.3	13.3	79.4
1968	26.2	24.0	9.1	.4	.0	.0	.0	.0	.0	T	T	18.8	86.9
1969	26.1	13.6	9.4	2.0	.0	.0	.0	.0	.0	1.2	11.4	21.9	85.6
1970	19.7	21.9	8.6	.9	.0	.0	.0	.0	.0	T	18.8	23.6	93.5
1971	26.8	21.4	26.8	2.8	.0	.0	.0	.0	.0	T	14.6	9.3	101.7
1972	27.3	32.1	7.9	1.1	.0	.0	.0	.0	.0	.6	6.6	18.5	94.1
1973	7.9	12.6	5.7	1.8	T	.0	.0	.0	.0	T	.4	10.8	39.2
1974	21.2	17.9	13.2	5.1	T	.0	.0	.0	.0	2.3	2.9	20.1	82.7
MEAN	20.6	18.0	13.4	2.3	.0	.0	.0	.0	.0	.4	12.6	17.3	86.9
MAX	29.9	32.1	26.8	5.1	T	.0	.0	.0	.0	2.3	36.3	31.4	101.7
MIN	6.0	8.7	5.7	.4	.0	.0	.0	.0	.0	.0	.4	5.3	39.2

TABLE 4. AVERAGE DAILY MINIMUM TEMPERATURE (°F)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1965	19.4	17.9	23.5	33.1	46.9	54.9	58.5	59.9	58.1	43.3	35.2	30.8	40.5
1966	16.4	20.7	29.5	37.0	42.6	57.8	62.1	60.7	53.0	42.8	36.3	26.9	40.5
1967	26.4	16.3	26.7	38.4	41.1	61.3	60.9	58.3	50.4	44.8	31.8	27.9	40.4
1968	16.3	13.1	27.9	38.5	44.6	55.3	61.9	62.5	58.1	47.4	36.3	24.5	40.5
1969	20.4	18.9	24.6	37.3	45.3	54.1	61.1	60.4	53.5	41.5	33.0	21.0	39.3
1970	9.6	14.6	22.2	36.0	48.9	56.5	60.9	59.0	54.5	46.6	34.7	24.9	38.9
1971	15.3	20.9	22.7	31.8	41.6	57.2	57.7	55.6	57.2	49.5	33.1	29.1	39.3
1972	19.9	15.5	21.2	31.3	46.8	52.3	60.4	57.7	52.7	40.5	33.1	27.7	38.3
1973	23.2	18.2	33.5	37.7	44.0	57.6	60.9	61.8	53.7	47.1	36.9	28.5	41.7
1974	23.4	17.7	28.0	38.3	43.1	54.0	58.5	59.4	50.6	39.6	34.5	26.9	39.5
MEAN	19.0	17.2	26.0	36.0	45.0	55.9	60.1	59.5	54.2	44.3	34.5	26.6	39.9
MAX	26.4	20.9	33.5	38.5	50.9	61.3	62.1	62.5	58.1	49.5	36.9	30.8	41.7
MIN	9.6	13.1	21.2	31.3	41.1	52.3	57.7	55.6	50.4	39.6	31.8	21.0	38.3

TABLE 5. HEATING DEGREE DAYS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1965	1209	1072	1093	696	174	105	28	44	76	441	673	892	6501
1966	1302	1068	862	609	417	84	5	10	131	420	666	1006	6530
1967	993	1137	961	518	471	18	29	32	186	376	835	955	6463
1968	1280	1277	881	696	377	81	20	26	85	333	671	1063	6590
1969	1109	1093	1020	528	324	149	20	20	169	482	798	1211	6923
1970	1488	1169	1139	605	239	103	18	18	125	366	731	1058	7060
1971	1324	1048	1078	723	496	88	32	55	97	242	763	893	6739
1972	1172	1217	1082	762	287	184	55	67	144	546	820	976	7272
1973	1090	1146	697	588	379	60	9	18	141	309	698	1022	6077
1974	1077	1128	915	521	373	191	32	9	204	511	719	1046	6886
MEAN	1210	1136	968	600	344	91	24	28	133	400	730	1012	6677

TABLE 6. AVERAGE TEMPERATURE (°F)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1965	25.8	26.6	29.5	41.6	61.0	64.5	67.5	68.2	66.3	50.5	42.6	34.0	48.6
1966	22.8	26.6	37.6	44.5	51.6	67.5	71.8	69.3	61.1	51.3	43.3	32.3	48.3
1967	32.8	34.2	34.8	47.6	69.6	71.1	68.8	66.6	60.0	53.1	36.9	34.0	48.3
1968	23.5	20.7	36.4	48.3	52.6	65.0	70.1	70.6	65.9	55.1	42.6	30.5	48.4
1969	27.0	25.7	31.8	47.2	54.7	62.6	69.0	69.6	61.7	50.0	38.3	25.8	47.0
1970	16.8	22.1	28.4	45.1	58.2	63.9	68.9	68.0	62.8	52.0	40.4	30.8	46.6
1971	22.0	27.3	30.0	40.6	51.9	66.0	66.9	64.7	64.1	57.0	39.3	35.9	47.2
1972	26.9	22.9	29.8	40.0	55.6	59.6	68.4	66.1	61.1	47.2	37.3	33.3	45.7
1973	29.6	23.8	42.2	46.0	52.5	66.2	69.7	69.6	62.6	54.8	42.8	31.7	49.3
1974	30.0	24.6	35.4	47.6	55.0	63.2	67.7	68.1	58.7	48.3	41.0	31.0	47.4
MEAN	25.7	24.6	33.6	44.9	54.1	65.0	68.9	68.1	62.4	52.0	40.4	32.1	47.7
MAX	32.8	27.3	42.2	48.3	61.0	71.1	71.8	70.6	66.3	57.0	43.3	36.0	49.3
MIN	16.8	20.7	28.4	40.0	49.6	59.6	66.9	64.7	58.7	47.2	36.9	25.8	45.7

TABLE 7. COOLING DEGREE DAYS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1965	0	0	0	0	57	98	112	153	123	0	0	0	543
1966	0	0	0	2	12	146	223	149	39	3	0	0	574
1967	0	0	2	3	0	239	150	90	20	12	0	0	486
1968	0	0	0	0	1	87	187	205	89	33	0	0	602
1969	0	0	0	4	10	81	150	170	76	5	0	0	496
1970	0	0	0	13	28	76	169	119	62	3	0	0	470
1971	0	0	0	0	7	155	96	55	75	3	0	0	341
1972	0	0	0	0	2	92	165	88	35	0	0	0	327
1973	0	0	0	6	0	84	183	167	76	1	0	0	497
1974	0	0	0	5	9	95	120	114	23	0	0	0	326
MEAN	0	0	0	3	13	97	151	131	62	6	0	0	469

TABLE 8. TOTAL PRECIPITATION (INCHES)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1965	3.88	3.00	3.95	1.66	3.40	3.75	3.48	2.08	2.24	3.84	4.27	2.68	38.41
1966	3.01	1.92	3.47	4.26	2.03	3.87	2.08	3.32	3.24	1.73	3.94	4.32	37.74
1967	.90	1.87	1.67	4.21	3.15	2.49	4.79	4.48	4.25	2.77	5.19	2.21	37.78
1968	2.98	1.13	1.69	2.64	3.06	2.63	2.36	2.76	2.93	3.40	4.71	4.04	34.33
1969	2.95	.73	1.43	3.27	3.69	4.88	3.65	1.75	1.99	3.02	2.99	2.43	36.38
1970	1.44	2.09	1.61	2.48	3.23	2.65	7.70	2.03	7.08	3.52	4.87	2.80	41.50
1971	1.63	2.04	1.85	1.81	2.20	2.83	2.67	3.46	3.51	3.48	4.51	4.06	34.06
1972	1.44	2.37	3.99	2.66	4.69	2.50	2.91	3.01	3.37	1.72	3.36	3.69	43.35
1973	1.72	2.00	3.18	2.71	4.57	4.28	1.55	3.96	2.22	3.36	2.83	3.46	38.04
1974	2.45	1.93	3.02	4.89	4.44	3.33	1.11	2.97	3.34	1.57	3.20	3.58	41.83
MEAN	2.19	1.93	2.74	3.26	3.63	4.22	3.23	3.06	3.62	2.88	4.33	3.93	38.38
MAX	3.88	3.00	3.02	3.27	3.69	7.50	7.70	4.48	7.08	3.84	5.34	4.32	43.35
MIN	.90	.73	1.43	1.66	2.03	2.49	1.11	1.75	1.99	1.57	2.83	2.21	34.06

NOTES

1. HEATING (COOLING) DEGREE DAYS = SUM OF NEGATIVE (POSITIVE) DEPARTURES OF AVERAGE DAILY TEMPERATURES FROM 65 °F.
2. T = TRACE – AN AMOUNT TOO SMALL TO MEASURE.
3. A MONTHLY PRECIPITATION AMOUNT MAY BE A TRACE; HOWEVER, IN CALCULATING THE 10 – YEAR MONTHLY MEAN, A TRACE IS CONSIDERED AS ZERO.
4. M = MISSING DATA. WHEN (M) APPEARS COLUMN MEANS ARE FOR NUMBER OF YEARS OF AVAILABLE DATA.

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PERIOD OF RECORD : 1965-74
29204 OBSERVATIONS

TABLE 9. FLYING WEATHER (PERCENT FREQUENCY OF OBSERVATIONS)

CEILING LESS THAN AND/OR VISIBILITY LESS THAN	HOUR (LST)	MONTH												ANN
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1500 FEET 3 MILES	01	23.2	20.9	21.9	12.3	8.1	6.3	3.9	4.2	5.0	5.5	14.7	18.4	12.0
	04	24.2	24.8	20.3	12.7	13.6	9.7	6.1	6.5	8.3	8.1	16.7	22.9	14.4
	07	21.9	24.1	23.9	14.0	14.5	14.3	15.2	15.5	16.3	8.1	16.3	21.3	17.1
	10	33.2	30.5	28.7	12.7	13.2	13.7	11.0	14.2	14.3	7.7	18.7	28.7	18.8
	13	30.0	29.4	25.2	10.3	11.3	9.0	10.0	8.1	9.0	7.1	17.3	26.1	16.0
	16	31.9	23.4	23.9	10.7	9.7	8.0	5.8	9.4	9.7	9.0	20.7	29.0	15.9
	19	21.6	16.7	21.6	12.3	10.0	7.0	4.8	8.8	10.3	7.1	13.3	20.3	12.8
	22	21.6	19.1	17.7	15.0	8.1	4.0	1.9	3.9	4.0	4.8	13.7	17.7	10.9
	ALL	26.0	23.6	22.9	12.5	11.1	9.0	7.3	8.8	9.6	7.2	16.4	23.1	14.8
1000 FEET 3 MILES	01	16.1	16.7	18.4	10.3	5.8	5.0	2.6	2.3	3.0	4.2	8.3	15.2	9.0
	04	17.4	20.9	16.1	10.0	8.4	8.0	3.9	4.2	5.0	4.2	9.7	16.1	10.3
	07	16.8	19.1	20.6	10.7	12.3	11.0	11.9	12.9	13.0	5.8	9.7	14.5	13.2
	10	29.4	26.2	23.9	8.7	9.0	10.0	9.0	11.3	11.0	6.8	14.0	24.8	15.3
	13	26.5	23.8	22.0	8.3	8.1	7.7	9.7	5.8	7.3	4.2	13.3	20.3	13.0
	16	25.2	22.0	20.6	8.7	9.0	7.3	5.8	7.8	7.3	7.4	17.0	22.9	13.4
	19	17.4	14.5	20.0	11.3	9.4	6.7	4.5	8.1	7.7	5.2	9.3	13.9	10.7
	22	13.9	14.2	14.2	9.3	5.8	3.3	1.6	2.6	2.0	3.2	8.0	10.0	7.3
	ALL	20.3	19.7	19.5	9.7	8.5	7.4	6.1	6.9	7.0	5.1	11.2	17.2	11.5
400 FEET 1 MILE	01	3.2	3.2	6.1	3.7	2.9	1.0	.6	.6	.7	1.3	2.3	3.9	2.5
	04	3.2	4.3	6.5	3.3	2.9	2.0	.3	.6	.7	.6	2.7	4.5	2.6
	07	4.2	2.5	7.1	2.3	4.8	1.3	.6	.6	2.0	.3	2.0	4.2	2.7
	10	6.8	4.6	7.1	2.0	3.2	.3	.3	.3	.3	.6	2.7	4.8	2.8
	13	5.5	6.4	4.9	2.0	2.3	1.3	.3	.3	.3	.3	2.0	3.5	2.4
	16	5.8	4.6	8.1	2.7	2.3	.7	.3		.3	.6	3.0	2.9	2.6
	19	3.5	3.2	5.8	1.7	1.3	1.0	.3	.3		.6	1.0	3.9	1.9
	22	3.2	3.5	7.4	2.7	2.6				.3	1.6	2.0	1.3	2.1
	ALL	4.4	4.0	6.6	2.5	2.8	1.0	.4	.4	.6	.8	2.2	3.6	2.4
200 FEET 1/2 MILE	01	1.0	1.8	1.6	1.0	.6	.3		.3	.3	.3	1.7	1.0	.8
	04	.6	.7	2.3	1.7	1.6	.7	.3	.6			1.0	1.3	.9
	07	1.0	1.4	2.9	1.0	1.9	.3	.3	.3	.7		.7	1.6	1.0
	10	1.3		1.6	.7	.6					.3	1.0	1.3	.6
	13	.6	.7	1.6	.7	.3						.3	1.3	.5
	16	1.3	1.4	2.6	1.0	.6						1.0	.6	.7
	19	.6	.4	1.6	.3	.3					.6	.7	.3	.4
	22	1.3		3.2	1.3	.3				.3		.3	.3	.6
	ALL	1.0	.8	2.2	1.0	.8	.2	.1	.2	.2	.2	.8	1.0	.7
100 FEET 1/4 MILE	01		.7	1.3	.7		.3		.3	.3		.7		.4
	04			1.3	.3	1.0	.3		.3			.3	.6	.4
	07	.6	.4	1.6	.3	1.6	.3		.3	.7			.3	.5
	10			.6	.3	.3					.3	.3	.6	.2
	13		.4	1.0	.3							.3	1.0	.2
	16		.7	1.6		.6						.3	.3	.3
	19	.3		1.3	.3								.3	.2
	22			1.0						.3			.3	.1
	ALL	.1	.3	1.2	.3	.4	.1		.1	.2	.0	.3	.4	.3

.0 INDICATES VALUE LESS THAN 0.05%

THESE VALUES ARE BASED ON 3-HOURLY OBSERVATIONS

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JANUARY

PERIOD OF RECORD 1963-74
2480 OBSERVATIONS

TABLE 10. CEILING, VISIBILITY, AND WEATHER BY WIND DIRECTION (PERCENT FREQUENCY OF OBSERVATIONS)

WIND DIR	CEILING (FEET)										VISIBILITY (MILES)						WEATHER							
	0	100	200 TO 300	400 TO 900	1000 TO 1400	1500 TO 1900	2000 TO 2900	3000 TO 4900	5000 TO 9500	OVER 9500	0 TO 3/16	1/4 TO 3/8	1/2 TO 3/4	1 TO 2 1/2	3 TO 6	OVER 6	RAIN AND/OR DRZL	FRZ RAIN AND/OR FRZ DRZL	SNOW AND/OR IP	FOG	FOG AND SMOKE	SMOKE AND/OR HAZE	TSTM	HAIL
N			.2	.4	.2	.4	.7	.6		.7			.2	.6	.6	1.7	.0		1.6	.7		.2		
NNE		.0	.1	.4	.1	.2	.0	.0	.1	.5			.2	.4	.3	.7	.1		.7	.5		.2		
NE		.0	.4	.6	.3	.4	.3	.1	.2	.8			.2	.8	.8	1.3	.3	.2	1.0	1.1		.2		
ENE		.0	.2	.7	.2	.3	.4	.2	.8	1.8	.0	.0	.2	.9	.7	2.7	.2	.3	1.3	1.0	.0	.4		
E				.0	.1	.2	.1	.2	.3	.9				.1	.1	1.6	.1	.2	.3	.1		.1		
ESE					.1	.0	.2	.1	.2	.9				.0	.2	1.2		.1	.2			.1		
SE				.0	.2	.1	.1	.3	.4	1.0				.1	.4	1.6	.2	.1	.3			.3		
SSE			.0	.1	.1	.1	.3	.7	.9	2.5				.1	1.0	3.7	1.1		.2	.4		.9		
S			.1	.4	.8	1.0	1.5	2.7	2.4	8.6			.1	1.2	3.8	12.5	2.2		2.7	1.8		1.9		
SSW				.3	.4	1.3	2.0	1.8	.7	5.1			.0	.8	3.3	7.3	.7		2.7	.6		1.7		
SW			.0	.3	.9	1.5	2.2	1.6	.6	2.7			.2	1.5	2.7	5.6	.4		3.8	.6		1.2		
WSW		.2	.3	1.5	1.4	1.9	2.0	1.3	.2	1.5	.0	.2	.3	2.0	3.4	4.0	1.0	.0	4.7	1.5		1.2		
W		.1	.4	1.7	1.2	3.1	3.8	1.8	.2	1.0	.0	.2	.4	2.6	4.3	6.0	.8		6.5	1.9		1.3		
WNW		.0	.1	.8	1.3	2.1	2.6	1.0	.0	.4		.0	.4	1.6	2.6	3.8	.2	.0	5.3	.7		.6		
NW		.0		.4	.5	.7	1.3	.5		.2			.1	.3	1.2	1.9	.1		2.2	.3		.2		
NNW			.1	.2	.2	.6	.7	.2	.1	.5		.1	.0	.4	.4	1.6			1.0	.2		.1		
CALM			.0		.2	.0	.1		.0	.1			.0	.1	.1	.2			.2	.2		.0		
TOT		.5	2.1	7.9	8.3	14.1	18.3	12.6	7.0	29.3	.1	.6	2.6	13.6	25.8	57.3	7.4	1.0	34.0	11.9	.0	9.8		

IP = ICE PELLETS (REPLACES SLEET AND SMALL HAIL)

TABLE 11. WIND DIRECTION VS. WIND SPEED (PERCENT FREQUENCY OF OBSERVATIONS)

A. ALL WEATHER

WIND DIR	WIND SPEED (KNOTS)										
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	OVER 40	TOT	AVG SPEED
N	.0	.3	1.3	1.2	.1	.0				3.1	10.2
NNE		.3	.7	.5	.0					1.5	9.7
NE	.2	.6	.8	1.3	.2					3.0	10.2
ENE	.0	.7	1.9	1.5	.4					4.5	10.2
E	.1	.6	.9	.2						1.9	7.3
ESE	.2	.6	.5	.1						1.4	6.6
SE	.0	.8	.9	.5	.1	.0				2.2	8.9
SSE	.1	.6	.9	1.5	1.4	.3	.1			4.8	13.5
S	.2	2.6	4.7	6.5	3.2	.4				17.6	12.0
SSW	.2	1.0	2.5	4.6	2.9	.5				11.4	13.3
SW	.1	1.0	2.9	4.8	1.2	.1	.0			9.9	11.9
WSW	.0	.8	3.5	4.3	1.5	.3	.0			10.2	12.6
W	.0	.6	2.9	6.0	3.2	.7	.1			13.5	14.1
WNW	.2	.3	1.9	3.3	2.0	.6	.2			8.3	14.3
NW	.0	.4	1.2	1.5	.8	.0				3.8	11.7
NNW	.0	.5	.8	1.0	.1					2.9	10.2
CALM	.5									.5	
TOT	2.1	11.8	27.7	38.6	16.5	2.9	.4			100.0	12.2

ALL WEATHER ALL WIND OBSERVATIONS

B. IFR

WIND DIR	WIND SPEED (KNOTS)										
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	OVER 40	TOT	AVG SPEED
N		.1	.3	.5						.8	11.1
NNE		.0	.3	.2	.0					.6	10.8
NE	.0	.2	.4	.6	.1					1.3	11.4
ENE		.2	.4	.5	.2					1.3	11.4
E		.0	.1							.1	7.0
ESE			.0							.0	8.0
SE		.1		.0						.1	9.0
SSE			.1	.1	.0	.0				.3	14.3
S	.0	.1	.5	.5	.2	.0				1.3	11.8
SSW			.1	.5	.2	.0				.9	14.2
SW		.1	.5	.8	.2					1.6	12.6
WSW	.0	.1	1.0	1.5	.6	.0				3.3	12.9
W		.1	.7	1.9	.9	.3	.0			4.0	14.7
WNW	.1	.1	.4	1.0	.5	.0	.1			2.2	14.8
NW		.1	.3	.4	.1					.8	11.5
NNW		.0	.2	.2						.4	10.0
CALM	.2									.2	
TOT	.4	1.3	5.3	8.7	3.1	.5	.2			19.4	12.7

IFR CEILING < 1000 FT AND/OR VISIBILITY < 3 MI BUT > 200 FT AND > 1/2 MI

TABLE 12. WEATHER CONDITION BY HOUR (MEAN NO. OF DAYS)

	WEATHER CONDITIONS	HOUR (LST)							
		01	04	07	10	13	16	19	22
WEATHER TYPE	RAIN AND/OR DRIZZLE	2.0	1.9	2.3	2.2	2.1	2.2	2.4	2.1
	FRZ RAIN AND/OR FRZ DRIZZLE	.3	.2	.4	.2	.2	.3	.3	.3
	SNOW AND/OR ICE PELLETS	10.1	10.4	11.2	11.0	10.6	9.5	10.5	10.1
	HAIL								
	PRECIPITATION	12.4	12.1	13.7	13.0	12.8	11.9	13.0	12.4
	FOG	2.9	3.4	3.3	4.0	4.1	3.9	4.3	3.1
	FOG AND SMOKE								
	SMOKE AND/OR HAZE	1.6	1.7	1.9	4.7	4.8	5.3	.1	
	OBSTRUCTIONS TO VISION	8.7	8.7	8.3	10.6	10.3	11.0	2.6	2.2
	THUNDERSTORM							8.7	7.0
WIND SPEED (KNOTS)	CALM	.2	.1	.3		.1	.1	.3	
	1 - 6	6.4	5.5	3.4	4.0	2.6	3.6	4.9	6.6
	7 - 10	10.1	9.6	9.8	8.3	7.6	7.1	8.9	8.7
	11 - 16	9.7	10.0	11.3	12.3	14.4	14.2	11.7	12.2
	17 - 21	5.7	5.4	5.0	5.4	5.1	4.8	4.2	4.9
	22 - 27	.8	.8	.9	.8	1.1	1.1	.8	1.3
	28 - 33	.1	.2	.1	.2	.1	.1	.2	.1
	OVER 33								
VISIBILITY (MILES)	0 - 3/16			.2				.1	
	1/4 - 3/8	.1	.1	.1	.4	.2	.3		.2
	1/2 - 3/4	.3	.4	.4	1.3	1.5	1.2	.6	.6
	1 - 2 1/2	3.9	3.1	3.4	4.8	5.8	5.4	3.0	2.7
	3 - 6	9.1	9.6	9.6	8.8	9.4	8.9	6.5	5.8
	OVER 6	22.0	21.6	21.3	19.7	18.1	18.2	20.8	22.9
TEMPERATURE (°F)	ZERO OR LOWER	.7	1.0	1.2	.5	.1	.1	.4	.5
	1 - 32	21.3	21.8	22.1	22.0	25.0	19.8	21.6	21.9
	33 - 44	7.1	6.9	6.5	6.9	6.3	8.6	7.2	7.3
	45 - 64	1.7	1.3	1.2	1.6	2.6	2.5	1.8	1.7
	65 - 89								
	90 - 99								
	OVER 99								

VALUES ARE ROUNDED TO NEAREST TENTH, BUT NOT ADJUSTED TO MAKE THEIR SUMS EXACTLY EQUAL TO COLUMN OR ROW TOTALS

THESE VALUES ARE BASED ON 3-HOURLY OBSERVATIONS

STATION LOCATION

ERIE, PENNSYLVANIA

Location	Occupied from	Occupied to	Airline distance and direction from previous location	Latitude North	Longitude West	Elevation above Ground: Ground at temperature site	Elevation above Ground: Wind instruments	Elevation above Ground: Extreme thermometers	Elevation above Ground: Psychrometer	Elevation above Ground: Telepsychrometer	Elevation above Ground: Tipping bucket rain gage	Elevation above Ground: Weighing rain gage	Elevation above Ground: 8" rain gage	Elevation above Ground: Hygrothermometer	Elevation above Sea Level: Pyranometer	Remarks
New Terminal Building Port Erie Airport# 4411 West 12th. Street 5 miles SW of Erie P. O.	2/01.60	Present	800 feet ENE	42° 05'	80° 11'	g731	d20	f25	f25			4 h32	4 h32	e4		d - 55 feet to 9/28/65. e - Commissioned 100 feet south of thermometer site 12/10/65. f - Standby status after 12/10/65. g - 732 feet to 12/10/65. h - Erie International Airport effective 1/1/68. h - Effective 10/30/73.

TIME ZONE CONVERSION EQUATION

GMT (Greenwich Mean Time) + Eastern Standard Time + 5 hours, Central Standard Time + 6 hours, Mountain Standard Time + 7 hours, Pacific Standard Time + 8 hours, or Alaskan Standard Time + 10 hours.

USCOMM-NOAA-ASHEVILLE, N.C. 10/83/1000