

1999

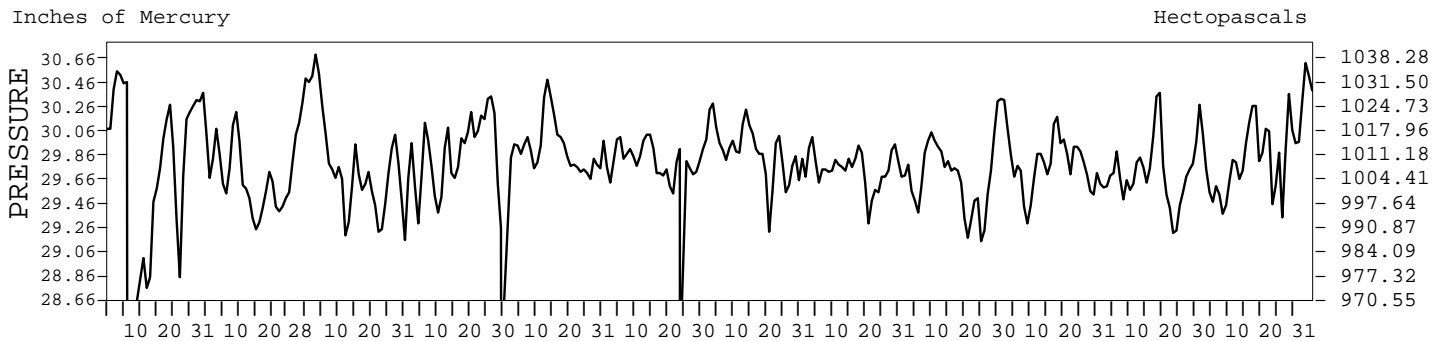
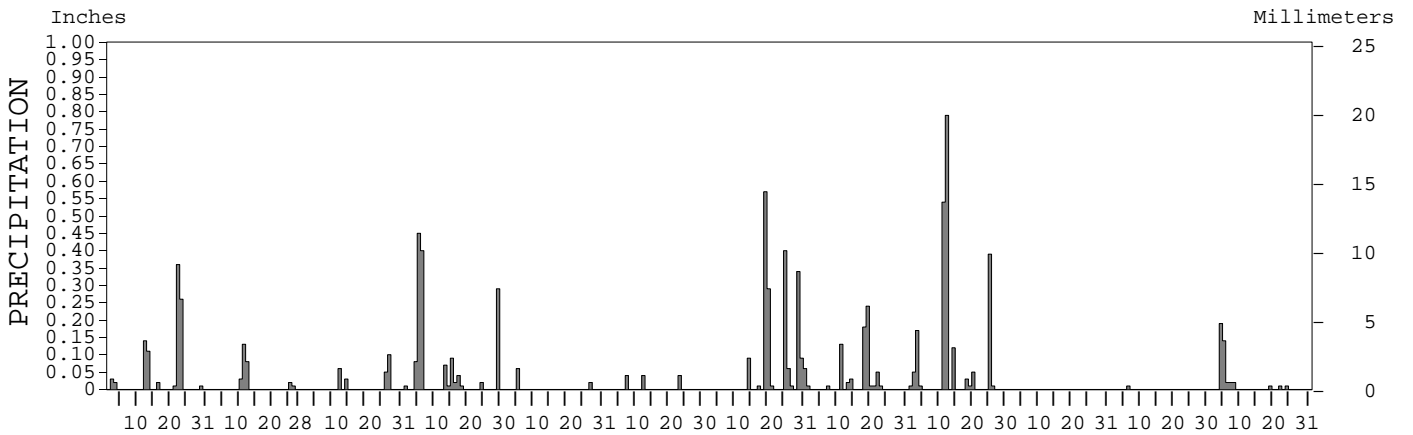
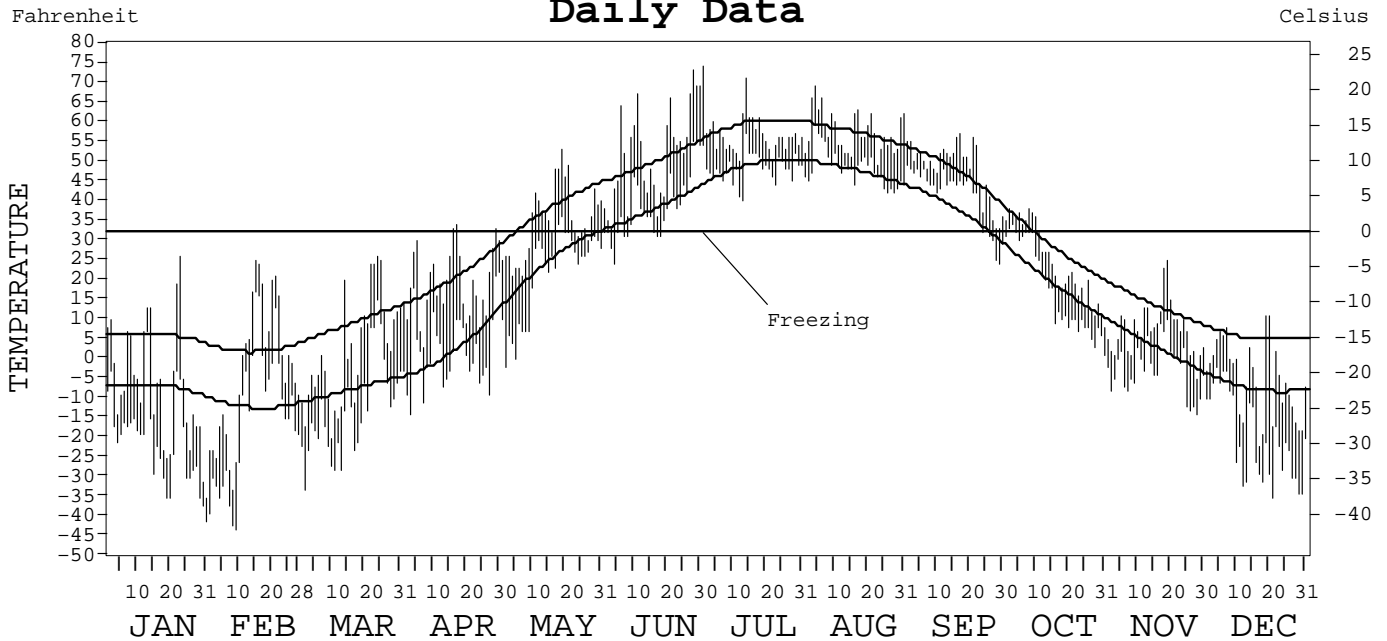
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0197-9825

KOTZEBUE,
ALASKA (OTZ)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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 ASHEVILLE, NORTH CAROLINA

METEOROLOGICAL DATA FOR 1999

KOTZEBUE, AK (OTZ)

LATITUDE: 66° 53' 06" N LONGITUDE: 162° 35' 48" W ELEVATION (FT): GRND: 11 BARO: 11 TIME ZONE: ALASKA (UTC + 9) WBAN: 26616

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	-6.5	-2.7	2.1	19.2	34.6	51.9	56.9	57.5	48.1	24.5	7.7	-5.0	24.0	
	HIGHEST DAILY MAXIMUM	26	25	26	34	53	73	74	69	57	38	25	11	74	
	DATE OF OCCURRENCE	23	15	24	17	19	28	01	04	17	08+	19	20+	JUL 01	
	MEAN DAILY MINIMUM	-20.9	-15.1	-12.7	1.8	21.3	38.2	48.3	48.2	41.1	17.5	-2.5	-20.0	12.1	
	LOWEST DAILY MINIMUM	-41	-43	-33	-14	-2	24	40	42	24	1	-14	-35	-43	
	DATE OF OCCURRENCE	31	9	02	03	02	04	13	28+	29	31	28	21	FEB 9	
	AVERAGE DRY BULB	-13.7	-8.9	-5.3	10.5	28.0	45.1	52.6	52.9	44.6	21.0	2.6	-12.5	18.1	
	MEAN WET BULB				10.9	27.4			50.6	42.5	19.4	2.1			
	MEAN DEW POINT				8.1	25.2			48.1	39.7	15.1	-2.0			
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 70°	0	0	0	0	0	1	2	0	0	0	0	0	0	3
	MAXIMUM ≤ 32°	31	28	31	27	14	0	0	0	0	21	30	31	31	213
	MINIMUM ≤ 32°	31	28	31	30	29	10	0	0	6	29	30	31	31	255
	MINIMUM ≤ 0°	30	23	27	15	2	0	0	0	0	0	0	21	31	149
H/C	HEATING DEGREE DAYS	2435	2062	2174	1627	1140	591	376	371	606	1356	1865	2397	17000	
	COOLING DEGREE DAYS	0	0	0	0	0	0	0	0	0	0	0	0	0	
RH	MEAN (PERCENT)	79	81	76	85	87	84	85	84	83	78	80	76	82	
	HOUR 03 LST	80	82	78	87	91	90	90	89	85	78	79	77	84	
	HOUR 09 LST	78	82	77	85	88	88	86	88	85	81	81	74	83	
	HOUR 15 LST	81	81	74	82	84	80	81	78	78	73	80	77	79	
	HOUR 21 LST	80	83	77	87	87	80	81	82	84	80	80	77	82	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	1	1	1	8	7	2	2	1	0	2	0	25	
	THUNDERSTORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)		29.68	29.83	29.85			29.89	29.75	29.73	29.76	29.75	29.91		
	MEAN SEA-LEVEL PRESS. (IN.)		29.69	29.84	29.86			29.90	29.76	29.74	29.77	29.76	29.92		
WINDS	RESULTANT SPEED (MPH)			3.4	3.0	2.6		3.4	3.2	2.4	7.6	6.9	2.1		
	RES. DIR. (TENS OF DEGS.)			03	12	26		23	17	05	07	08	02		
	MEAN SPEED (MPH)	11.0	12.2	7.6	12.9	7.3	9.2	11.9	11.2	11.3	9.8	9.1	7.0	10.0	
	PREVAIL. DIR. (TENS OF DEGS.)	11	11	05	11	27	28	28	28	09	09	10	04	11	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	45	45	38	40	28	31	33	30	40	36	36	29	45	
	DIR. (TENS OF DEGS.)	11	11	06	13	11	28	18	16	08	10	10	12	11	
	DATE OF OCCURRENCE	22	11	27	29+	18	16	31+	19	30	01	19	24	FEB 11	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	53	48	44	46	30	36	40	36	47	44	40	32	53	
DIR. (TENS OF DEGS.)	10	11	06	13	28	27	18	14	09	10	09	12	10		
DATE OF OCCURRENCE	21	11	27	29	26+	16	31	19	30	01	19	24	JAN 21		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.96	0.27	0.23	1.49	0.08	0.12	1.93	0.70	2.18	T	0.01	0.42	8.39	
	GREATEST 24-HOUR (IN.)	0.58	0.13	0.15	0.29	0.06	0.04	0.81	0.24	1.33	T	0.01	0.19	1.33	
	DATE OF OCCURRENCE	22-23	11	26-27	29	05	23+	19-20	19	11-12	31+	06	04	SEP 11-12	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	9	5	4	12	2	3	11	11	12	0	1	8	78	
PRECIPITATION ≥ 0.10	4	1	1	3	0	0	4	3	5	0	0	2	23		
PRECIPITATION ≥ 1.00	0	0	0	0	0	0	0	0	0	0	0	0	0		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	22.8	10.0	4.5	19.6	1.7	T	0.0	0.0	T	T	0.4	4.3	63.3	
	GREATEST 24-HOUR (IN.)	10.7	5.0	1.5	8.5	1.6	T	0.0	0.0	T	T	0.3	2.0	10.7	
	DATE OF OCCURRENCE	22	11	26-27	05-06	05	02+			26+	31+	22	04	JAN 22	
	MAXIMUM SNOW DEPTH (IN.)	32	33	33	45	42	T	0	0	0	T	1	6	45	
	DATE OF OCCURRENCE	24+	21+	21+	16+	06+	05+				31+	30+	31+	APR 16+	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	4	3	3	5	1	0	0	0	0	0	0	2	18		

NORMALS, MEANS, AND EXTREMES

KOTZEBUE, AK (OTZ)

LATITUDE: 66° 53' 06" N LONGITUDE: 162° 35' 48" W ELEVATION (FT): GRND: 11 BARO: 11 TIME ZONE: ALASKA (UTC + 9) WBAN: 26616

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	5.6	2.3	8.7	20.3	37.9	49.7	59.1	57.0	46.9	27.6	13.1	5.5	27.8
	MEAN DAILY MAXIMUM	51	4.1	2.5	8.6	21.3	38.2	50.1	59.2	56.3	46.6	27.8	13.6	4.3	27.7
	HIGHEST DAILY MAXIMUM	57	39	40	39	48	74	85	85	80	69	51	38	37	85
	YEAR OF OCCURRENCE		1961	1989	1973	1988	1947	1991	1958	1968	1978	1984	1994	1982	JUN 1991
	MEAN OF EXTREME MAXS.	51	28.6	26.8	29.9	38.2	55.6	68.8	73.6	68.9	59.1	41.8	31.2	28.5	45.9
	NORMAL DAILY MINIMUM	30	-7.5	-12.0	-8.0	2.3	24.5	37.8	48.5	47.3	37.0	18.2	2.4	-7.4	15.3
	MEAN DAILY MINIMUM	51	-9.0	-11.9	-8.0	3.4	24.8	38.3	48.5	46.8	36.6	18.5	2.8	-8.6	15.2
	LOWEST DAILY MINIMUM	57	-49	-52	-48	-44	-18	20	30	29	13	-19	-36	-47	-52
	YEAR OF OCCURRENCE		1989	1968	1956	1943	1945	1948	1976	1994	1992	1975	1948	1974	FEB 1968
	MEAN OF EXTREME MINS.	51	-33.5	-34.8	-29.9	-18.6	7.1	29.0	39.5	37.8	24.8	-1	-17.6	-30.1	-2.2
	NORMAL DRY BULB	30	-1.0	-4.8	.4	11.3	31.2	43.8	53.8	52.1	42.0	22.9	7.8	-9	21.5
	MEAN DRY BULB	51	-2.4	-4.7	.4	12.3	31.5	44.2	53.8	51.5	41.6	23.1	8.3	-2.2	21.4
	MEAN WET BULB	13	-1.4	-2.1	-.3	11.7	29.7	42.0	51.4	48.6	39.0	20.7	6.8	1.5	20.6
	MEAN DEW POINT	13	-6.6	-7.6	-6.0	7.4	26.7	38.8	48.2	45.7	35.2	17.1	2.2	-2.6	16.5
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 70°	30	0.0	0.0	0.0	0.0	0.1	0.8	2.8	1.2	0.0	0.0	0.0	0.0	4.9	
MAXIMUM ≤ 32°	30	30.2	27.2	30.2	24.0	8.4	0.1	0.0	0.0	0.5	20.4	28.4	30.3	199.7	
MINIMUM ≤ 32°	30	31.0	28.0	31.0	29.8	25.1	6.3	0.1	0.1	6.9	28.3	29.9	31.0	247.5	
MINIMUM ≤ 0°	30	20.3	20.7	21.8	14.6	0.9	0.0	0.0	0.0	0.0	1.9	13.1	21.1	114.4	
H/C	NORMAL HEATING DEG. DAYS	30	2046	1954	2003	1611	1048	636	353	407	690	1305	1716	2043	15812
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	0	0	6	7	0	0	0	0	13
RH	NORMAL (PERCENT)	30	72	70	71	76	81	82	81	81	79	79	76	74	77
	HOUR 03 LST	30	72	70	71	77	85	87	86	86	83	81	76	73	79
	HOUR 09 LST	30	72	70	71	76	82	83	82	84	83	81	76	74	78
	HOUR 15 LST	30	72	69	69	74	77	78	76	75	72	75	76	74	74
	HOUR 21 LST	30	72	71	72	77	80	79	78	79	79	79	77	74	76
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	56	1.1	1.1	0.7	1.7	3.5	4.7	2.2	0.9	0.8	0.6	0.5	0.8	18.6
	THUNDERSTORMS	49	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.6	
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	52	4.6	4.2	4.3	4.6	5.0	5.3	5.7	6.2	5.8	5.5	5.1	4.7	5.1
	MIDNIGHT-MIDNIGHT (OKTAS)	31	4.0	3.5	3.8	4.2	4.6	4.9	5.7	5.9	5.5	5.1	4.6	4.3	4.7
	MEAN NO. DAYS WITH:														
	CLEAR	53	11.3	12.3	12.2	10.2	7.8	5.6	4.3	3.4	5.6	7.6	8.6	10.6	99.5
PARTLY CLOUDY	53	4.1	3.4	5.6	6.7	8.9	10.5	8.0	6.3	5.0	4.5	4.0	4.2	71.2	
CLOUDY	53	15.6	12.6	13.2	13.1	14.2	13.8	18.6	20.7	18.9	18.4	16.8	15.6	191.5	
PR	MEAN STATION PRESSURE (IN)	25	29.85	29.96	29.90	29.89	29.89	29.90	29.90	29.79	29.78	29.81	29.79	29.81	29.86
	MEAN SEA-LEVEL PRES. (IN)	15	29.90	29.96	29.96	29.93	29.90	30.01	29.91	29.84	29.80	29.82	29.83	29.81	29.89
WINDS	MEAN SPEED (MPH)	38	13.7	13.2	11.7	11.9	10.9	11.9	12.5	13.1	13.2	13.3	14.0	13.1	12.7
	PREVAIL. DIR (TENS OF DEGS)	19	10	11	10	11	29	29	29	29	11	11	10	09	11
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	2	45	45	43	46	34	31	37	39	40	36	36	48	48
	DIR. (TENS OF DEGS)		11	11	11	11	16	28	08	13	08	10	10	11	11
	YEAR OF OCCURRENCE		1999	1999	1998	1998	1998	1999	1998	1998	1999	1999	1999	1998	DEC 1998
	MAXIMUM 5-SECOND:														
SPEED (MPH)	2	53	48	47	54	38	36	43	47	47	44	40	54	54	
DIR. (TENS OF DEGS)		10	11	11	12	13	27	08	13	09	10	09	11	11	
YEAR OF OCCURRENCE		1999	1999	1998	1998	1998	1999	1998	1998	1999	1999	1999	1998	DEC 1998	
PRECIPITATION	NORMAL (IN)	30	0.43	0.32	0.35	0.37	0.33	0.52	1.46	1.78	1.58	0.73	0.59	0.52	8.98
	MAXIMUM MONTHLY (IN)	57	1.77	1.24	1.23	1.49	1.05	1.76	3.51	5.26	4.31	3.20	2.22	1.40	5.26
	YEAR OF OCCURRENCE		1973	1996	1954	1999	1989	1998	1981	1998	1977	1993	1990	1987	AUG 1998
	MINIMUM MONTHLY (IN)	57	T	0.00	T	T	T	0.01	0.01	0.08	0.03	0.04	0.01	0.02	0.00
	YEAR OF OCCURRENCE		1966	1979	1986	1943	1979	1956	1977	1991	1967	1999	1999	1956	FEB 1979
	MAXIMUM IN 24 HOURS (IN)	57	0.81	0.68	0.47	0.46	0.56	1.23	1.78	1.48	1.65	1.32	0.53	0.49	1.78
	YEAR OF OCCURRENCE		1963	1951	1954	1995	1963	1998	1946	1954	1978	1997	1982	1998	JUL 1946
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	7.8	6.5	7.1	7.4	5.2	6.3	10.6	13.6	12.3	10.2	9.7	9.1	105.8
PRECIPITATION ≥ 1.00	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.1	0.0	0.0	0.0	0.1	
SNOWFALL	NORMAL (IN)	30	6.2	5.0	5.6	5.7	2.0	0.2	T	0.*	1.1	7.1	8.6	8.5	50.0
	MAXIMUM MONTHLY (IN)	56	23.9	19.1	21.9	19.6	12.0	2.4	0.1	0.3	7.4	18.0	24.3	23.6	24.3
	YEAR OF OCCURRENCE		1973	1996	1954	1999	1964	1963	1959	1962	1957	1971	1993	1988	NOV 1993
	MAXIMUM IN 24 HOURS (IN)	56	10.7	6.8	8.6	8.5	4.7	2.1	0.1	0.3	5.7	7.4	6.4	11.0	11.0
	YEAR OF OCCURRENCE		1999	1951	1954	1999	1984	1963	1959	1962	1996	1973	1982	1995	DEC 1995
	MAXIMUM SNOW DEPTH (IN)	50	41	42	48	53	43	8	0	0	4	11	22	35	53
	YEAR OF OCCURRENCE		1995	1995	1973	1973	1973	1966			1957	1973	1993	1994	APR 1973
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	2.2	1.8	2.0	1.9	0.7	0.*	0.0	0.0	0.4	2.7	3.1	3.0	17.8	

PRECIPITATION (inches) 1999 KOTZEBUE, AK (OTZ)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0.25	0.18	0.22	0.08	0.04	0.05	1.27	1.44	0.60	0.77	0.81	0.29	6.00
1971	0.16	0.17	0.10	0.16	0.26	0.24	2.98	0.38	0.74	0.76	0.24	0.77	6.96
1972	0.51	0.02	0.12	0.67	0.35	0.59	0.46	1.17	1.34	1.00	0.30	0.27	6.80
1973	1.77	0.41	0.74	0.12	0.09	0.52	1.73	3.27	1.51	1.15	1.31	0.22	12.84
1974	0.18	0.39	0.04	0.09	0.04	0.13	1.90	1.78	1.28	0.05	0.78	0.19	6.85
1975	0.34	0.65	0.16	0.43	0.14	0.66	1.44	1.51	0.88	0.86	0.60	0.35	8.02
1976	0.31	0.21	0.82	0.05	0.12	0.68	1.16	0.48	1.34	0.45	0.53	0.44	6.59
1977	0.45	0.26	0.31	0.42	0.31	0.02	0.01	0.71	4.31	1.13	0.12	0.53	8.58
1978	0.07	0.10	0.10	0.37	T	0.82	1.43	0.59	2.49	0.30	0.69	0.71	7.67
1979	0.01	0.00	0.10	0.38	T	1.43	0.79	2.79	1.61	0.46	1.79	0.51	9.87
1980	0.71	0.60	0.62	0.35	0.03	1.12	1.52	0.92	0.54	0.52	0.15	0.33	7.41
1981	0.89	0.48	0.60	0.44	0.16	0.09	3.51	1.12	0.39	0.58	0.43	0.61	9.30
1982	1.29	0.60	0.52	0.33	0.22	0.70	1.24	1.38	1.76	1.12	1.12	0.36	10.64
1983	0.29	0.15	0.27	0.72	0.13	0.55	1.63	3.36	1.68	0.99	1.04	0.51	11.32
1984	0.54	0.01	0.11	0.24	0.64	0.38	2.11	2.98	1.70	0.35	0.50	0.69	10.25
1985	0.39	0.11	0.77	0.46	0.50	0.60	0.06	2.03	2.18	2.39	0.69	0.56	10.74
1986	0.43	0.44	T	0.22	0.01	0.34	1.42	2.39	3.29	0.26	0.30	0.87	9.97
1987	0.47	0.57	0.21	0.09	0.05	0.71	1.15	0.66	1.99	0.41	0.34	1.40	8.05
1988	0.19	0.31	0.77	0.05	0.83	0.15	0.91	2.35	0.99	0.64	0.28	1.37	8.84
1989	0.27	1.23	0.14	1.41	1.05	0.25	2.41	3.17	1.80	1.04	0.36	0.55	13.68
1990	0.36	0.55	0.75	0.45	0.37	0.85	0.92	2.30	3.01	1.91	2.22	1.07	14.76
1991	1.01	0.56	1.00	0.51	0.22	0.12	1.99	0.08	1.07	1.69	0.12	0.29	8.66
1992	0.26	0.80	0.88	0.10	0.40	0.50	0.37	3.00	0.59	0.84	1.16	0.92	9.82
1993	0.59	0.25	0.64	0.08	0.18	0.93	0.69	1.78	2.45	3.20	2.00	0.62	13.41
1994	0.47	0.18	0.91	0.29	0.39	0.24	3.07	4.70	0.86	1.10	0.75	0.63	13.59
1995	0.52	0.39	0.13	1.22	0.92	1.18	0.71	0.87	1.11	1.12	0.56	0.64	9.37
1996	0.43	1.24	0.18	0.08	0.58	0.88	1.18	1.73	1.69	0.83	1.10	0.35	10.27
1997	0.84	0.67	0.03	0.81	0.62	0.07	1.11	3.23	2.83	2.19	0.84	0.49	13.73
1998	0.30	0.44	0.20	1.02	0.90	1.76	1.15	5.26	1.66	0.57	0.31	0.62	14.19
1999	0.96	0.27	0.23	1.49	0.08	0.12	1.93	0.70	2.18	T	0.01	0.42	8.39
POR= 57 YRS	0.42	0.36	0.37	0.38	0.36	0.54	1.40	2.14	1.53	0.72	0.51	0.40	9.13

WBAN : 26616

AVERAGE TEMPERATURE (°F) 1999 KOTZEBUE, AK (OTZ)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	-13.2	3.9	6.5	10.9	29.7	44.8	53.8	50.5	36.0	14.3	12.9	-2.1	20.7
1971	-13.7	-18.9	-7.2	9.6	27.1	47.4	56.0	48.7	41.4	21.7	6.3	0.1	18.2
1972	-4.4	-8.6	-13.3	7.3	34.0	43.2	59.0	55.0	41.1	29.2	9.8	1.7	21.2
1973	-9.8	4.3	-5.2	9.5	30.6	42.1	49.2	48.7	42.6	21.5	5.6	2.0	20.1
1974	-3.7	-19.3	-3	12.9	30.1	39.6	53.3	55.2	47.7	19.4	2.8	-17.1	18.4
1975	-9.8	-3.8	5.1	9.0	28.3	37.5	50.3	51.5	36.9	20.4	-1.8	-6.6	18.1
1976	-5.1	-17.6	0.8	6.0	30.0	39.4	50.9	55.2	44.6	24.8	12.0	-4.3	19.7
1977	12.9	4.3	-13.3	3.6	30.5	43.8	58.8	58.9	43.9	24.6	3.5	1.1	22.7
1978	12.9	0.5	1.0	17.8	36.4	46.8	58.5	56.3	46.4	20.3	15.8	2.1	26.2
1979	11.9	-9.6	7.8	18.8	33.5	48.7	54.0	55.6	42.0	27.1	18.1	-11.3	24.7
1980	-6.3	7.3	10.8	15.9	38.5	47.4	55.6	50.3	38.9	28.8	10.8	-10.2	24.0
1981	15.2	1.0	10.9	14.6	34.9	48.5	51.4	51.4	40.7	24.2	8.9	-1.3	25.0
1982	0.0	4.6	3.1	6.6	28.8	47.6	56.3	53.5	42.8	20.1	12.2	7.3	23.6
1983	-5.2	-2.0	7.5	22.2	37.6	42.3	54.1	47.8	38.7	19.4	15.6	12.1	24.2
1984	-3.3	-21.0	5.8	0.4	24.1	42.2	51.3	47.0	45.0	28.2	8.0	5.1	19.4
1985	16.2	-7.0	-4.3	-5.4	26.6	39.3	54.1	53.4	40.3	20.8	10.9	12.9	21.5
1986	-3.0	7.1	-4.9	4.1	29.7	43.6	53.3	50.0	41.2	21.3	9.6	9.8	21.8
1987	-2.0	-4	4.2	7.8	32.7	47.9	56.6	53.4	37.7	30.7	5.3	-2.6	22.6
1988	7.5	1.4	-2.3	17.7	34.4	44.7	52.2	52.0	42.9	18.1	1.5	3.9	22.8
1989	-19.9	17.7	5.3	21.0	29.6	44.1	54.2	53.9	45.6	23.6	0.4	5.6	23.4
1990	-8.6	-24.1	1.8	15.9	38.3	45.7	58.8	56.8	40.1	24.5	4.0	-6.9	20.5
1991	-3.0	-4.7	-2.9	14.5	33.1	50.3	54.4	51.8	45.8	29.3	7.6	-4.7	22.6
1992	1.2	-8.7	-4.9	9.3	23.2	43.8	57.4	49.9	32.2	18.8	6.6	-2.4	18.9
1993	-9.0	4.5	0.7	19.5	33.5	47.8	59.0	49.4	38.4	29.0	11.2	8.9	24.4
1994	0.8	2.8	-7.3	11.4	32.8	43.7	55.6	50.6	39.9	18.3	2.5	-2.8	20.7
1995	-5	2.3	-7.3	15.0	36.3	44.9	55.8	50.7	47.6	26.1	6.6	-3	23.1
1996	-3.5	-3.5	8.3	10.8	34.7	46.1	54.6	48.8	38.2	16.9	12.4	-1.6	21.9
1997	-3.7	3.7	-4.5	17.9	37.4	47.7	54.2	53.6	47.2	19.0	15.7	-2.2	23.8
1998	-5.2	-2.7	13.5	24.1	33.5	46.9	56.0	48.5	43.4	29.3	13.9	1.1	25.2
1999	-13.7	-8.9	-5.3	10.5	28.0	45.1	52.6	52.9	44.6	21.0	2.6	-12.5	18.1
POR= 57 YRS	-2.9	-4.4	-2	12.2	31.2	44.2	53.8	51.3	41.4	23.4	8.1	-2.1	21.3

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HEATING DEGREE DAYS (base 65°F) 1999 KOTZEBUE, AK (OTZ)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	342	444	860	1565	1559	2081	2444	2354	2236	1658	1168	538	17249
1971-72	276	499	700	1335	1757	2014	2154	2141	2434	1725	953	646	16634
1972-73	192	304	710	1104	1651	1964	2324	1701	2177	1663	1060	680	15530
1973-74	483	500	663	1342	1779	1953	2129	2363	2025	1559	1074	756	16626
1974-75	353	297	512	1406	1868	2550	2323	1928	1855	1678	1129	819	16718
1975-76	451	415	834	1382	2006	2222	2176	2403	1993	1771	1078	762	17493
1976-77	430	296	606	1237	1586	2152	1610	1701	2436	1843	1063	627	15587
1977-78	204	183	622	1247	1845	1984	1612	1807	1985	1408	883	537	14317
1978-79	199	264	550	1379	1470	1953	1639	2093	1772	1380	969	485	14153
1979-80	332	282	685	1168	1400	2372	2207	1674	1679	1464	812	520	14595
1980-81	284	451	778	1119	1618	2336	1536	1793	1668	1505	925	489	14502
1981-82	419	416	721	1258	1676	2055	2013	1692	1920	1753	1120	526	15569
1982-83	269	348	660	1384	1580	1783	2177	1879	1779	1278	841	675	14653
1983-84	333	527	786	1408	1472	1638	2117	2500	1834	1937	1262	675	16489
1984-85	418	550	591	1133	1706	1858	1509	2019	2153	2115	1184	765	16001
1985-86	333	352	737	1363	1617	1610	2112	1619	2171	1825	1088	634	15461
1986-87	354	458	709	1345	1661	1710	2080	1830	1883	1712	993	508	15243
1987-88	263	356	811	1054	1787	2094	1784	1846	2089	1418	944	603	15049
1988-89	390	395	658	1447	1905	1894	2635	1321	1844	1313	1090	619	15511
1989-90	331	336	577	1275	1936	1843	2283	2499	1961	1468	822	580	15911
1990-91	199	249	739	1249	1827	2229	2107	1952	2106	1509	986	451	15603
1991-92	321	403	568	1098	1719	2164	1977	2135	2166	1667	1291	627	16136
1992-93	236	460	977	1423	1752	2090	2297	1693	1995	1361	970	511	15765
1993-94	184	476	788	1110	1609	1733	1991	1745	2244	1606	991	630	15107
1994-95	290	440	746	1441	1873	2102	2027	1755	2243	1495	880	595	15887
1995-96	278	435	517	1198	1750	2021	2130	1991	1756	1626	929	562	15193
1996-97	312	496	796	1484	1574	2057	2123	1709	2149	1407	849	514	15470
1997-98	330	347	527	1416	1471	2076	2168	1889	1589	1220	971	536	14540
1998-99	280	505	641	1102	1525	1971	2435	2062	2174	1627	1140	591	16053
1999-	376	371	606	1356	1865	2397							

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COOLING DEGREE DAYS (base 65°F) 1999 KOTZEBUE, AK (OTZ)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	0	0	0	3	0	0	0	0	0	3
1971	0	0	0	0	0	14	2	0	0	0	0	0	16
1972	0	0	0	0	0	0	14	1	0	0	0	0	15
1973	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	18	1	0	0	0	0	19
1978	0	0	0	0	0	0	1	0	0	0	0	0	1
1979	0	0	0	0	0	0	1	0	0	0	0	0	1
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	5	0	0	0	0	0	5
1982	0	0	0	0	0	12	3	0	0	0	0	0	15
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	3	1	0	0	0	0	4
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	5	9	0	0	0	0	0	14
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	4	15	1	0	0	0	0	20
1991	0	0	0	0	0	17	1	0	0	0	0	0	18
1992	0	0	0	0	0	0	8	0	0	0	0	0	8
1993	0	0	0	0	0	0	9	0	0	0	0	0	9
1994	0	0	0	0	0	0	3	1	0	0	0	0	4
1995	0	0	0	0	0	0	0	0	0	0	0	0	0
1996	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	0	0	0	0	0	0	0	0
1998	0	0	0	0	0	0	5	0	0	0	0	0	5
1999	0	0	0	0	0	0	0	0	0	0	0	0	0

SNOWFALL (inches) 1999 KOTZEBUE, AK (OTZ)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.6	6.2	14.6	6.0	2.9	2.8	1.7	4.3	3.7	0.2	43.0
1971-72	0.0	0.0	T	18.0	5.9	16.4	13.4	0.1	2.7	11.0	0.9	0.2	68.6
1972-73	0.0	0.0	T	11.1	6.7	6.5	23.9	5.2	10.2	1.9	1.3	T	66.8
1973-74	0.0	T	3.0	14.5	14.3	5.5	1.1	6.2	0.8	2.2	0.4	0.3	48.3
1974-75	0.0	0.0	0.8	0.8	12.0	3.6	5.5	10.1	2.3	7.2	0.5	T	42.8
1975-76	0.0	0.0	3.1	10.9	2.6	8.8	4.4	2.7	11.9	2.6	1.8	T	48.8
1976-77	T	0.0	T	6.0	12.8	6.7	8.2	5.8	4.1	4.3	2.5	0.0	50.4
1977-78	0.0	0.0	0.2	0.5	2.0	5.6	1.1	1.3	2.2	2.9	T	0.0	15.8
1978-79	0.0	0.0	T	5.1	7.4	9.6	0.1	0.0	1.0	1.9	T	T	25.1
1979-80	0.0	0.0	T	4.0	15.0	4.4	7.2	3.8	6.0	3.3	0.0	T	43.7
1980-81	0.0	0.0	2.1	4.1	2.5	3.3	9.6	5.2	7.3	6.3	0.9	0.0	41.3
1981-82	0.0	0.0	0.4	5.3	4.5	6.1	12.9	2.3	6.4	3.3	T	T	41.2
1982-83	0.0	0.0	0.4	12.7	12.3	3.0	3.0	1.8	2.7	2.8	T	T	38.7
1983-84	0.0	T	1.6	4.1	12.3	6.1	6.1	0.2	2.8	5.2	6.7	0.0	45.1
1984-85	0.0	0.0	T	5.6	7.8	9.4	5.3	1.6	9.3	5.3	4.4	0.0	48.7
1985-86	0.0	0.0	1.5	4.1	8.0	6.5	10.1	3.3	T	3.8	T	0.0	37.3
1986-87	0.0	0.0	2.0	4.1	2.9	11.6	6.0	9.2	3.7	1.0	T	T	40.5
1987-88	0.0	0.0	T	3.8	4.7	21.7	2.8	4.8	9.4	0.6	T	T	47.8
1988-89	0.0	0.0	0.4	6.6	4.9	23.6	4.3	11.3	2.0	16.0	3.4	T	72.5
1989-90	0.0	0.0	T	8.8	4.7	8.6	5.8	6.7	9.5	5.1	0.4	0.0	49.6
1990-91	0.0	0.0	3.1	9.6	22.8	15.4	12.7	6.2	13.4	6.9	0.4	T	90.5
1991-92	0.0	0.0	0.0	6.6	1.1	4.4	5.7	6.8	14.0	1.7	3.7	0.0	44.0
1992-93	0.0	0.0	0.4	10.0	14.8	10.8	7.2	3.1	10.2	1.3	0.3	T	58.1
1993-94	0.0	0.0	5.0	4.1	24.3	11.0	7.0	1.9	10.4	3.7	0.6	T	68.0
1994-95	0.0	0.0	T	14.9	8.2	7.8	5.1	4.0	1.4	2.6	0.5	T	44.5
1995-96	0.0	0.0	0.0	7.1	7.6	17.9	6.5	19.1	2.1	1.9	T	T	62.2
1996-97	0.0	0.0	6.3	9.2	12.4	3.8	11.3	6.4	0.3	7.9	0.1	0.0	57.7
1997-98	0.0	0.0	0.0	7.5	12.6	5.2	3.2	4.9	2.6	10.5	3.1	T	49.6
1998-99	0.0	0.0	0.0	2.5	6.6	6.4	22.8	10.0	4.5	19.6	1.7	T	74.1
1999-	0.0	0.0	T	T	0.4	4.3							
POR= 55 YRS	0.0	0.0	1.1	6.5	8.5	7.8	6.3	5.2	5.7	5.3	1.7	0.1	48.2

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REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1999
KOTZEBUE,
ALASKA (OTZ)

Kotzebue is located 26 miles inside the Arctic Circle and very near the north end of a long narrow peninsula bounded on the north and west by Kotzebue Sound and on the east by Hotham Inlet, known locally as Kobuk Lake. These water bodies produce a maritime type of climate when the water is ice-free, which is roughly from late May to late October, although the western portion of the sound is not completely frozen until about December and not completely free of ice again until the middle of July. Local topography is nearly uniform with a general low relief, so that there are no significant terrain barriers in the immediate area to impede surface air flow or produce pronounced local variations in temperature and precipitation. The mountainous Seward Peninsula to the south, however, does deflect some low pressure systems which originate in or beyond the Bering Sea area and move toward this region.

During the ice-free period cloudy skies prevail, fog occurs, daily temperatures are relatively uniform, relative humidity is high, and westerly winds predominate. These normal conditions are altered only by cyclonic storms or by pressure systems strong enough to overcome local circulation tendencies.

When the water surrounding the peninsula becomes frozen, the climatic characteristics approach the continental type. The change from maritime to approximately continental conditions becomes progressively more pronounced as the ice cover advances across the sound toward the Arctic Ocean. A similar, but inverse, change occurs as the ice diminishes.

Average winter temperatures are not as severe as might be expected at this latitude. Cyclonic storms and the influence of the Arctic Ocean, which is often relatively free of ice, moderate the winter temperatures.

Precipitation is very light. Snow generally falls in every month of the year except July and August. The total for a normal year is 8 inches.

Cyclonic storms are frequent, especially from October to April, and many of them are accompanied by high winds and blizzard conditions during the winter months. The absence of pronounced sheltering terrain results in unimpeded air movement throughout the year. Windy weather, somewhat characteristic of the area, results largely from the numerous cyclonic storms and uneven heat radiation of adjoining land and water areas.

STATION LOCATION

KOTZEBUE, ALASKA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATED INSTRUMENTS	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						SEA LEVEL	GROUND											
							WIND	TEMP	PRECIP	REL HUM	WIND DIR	WIND SPC	WIND DIR	WIND SPC	WIND DIR			
<u>COOPERATIVE</u> Postmaster Post Office	10/01/28	5/31/30		66°52'	162°38'	15												Temperature and precipitation data available for portions of the period October 1897 through November 1904.
<u>AIRPORT</u> Signal Corps ACS Radio Building	9/01/30	8/06/41	.5 mi. W	66°52'	162°38'	11	24	5										Shelter over tundra, 15 feet from building. Station about 100 yards from Kotzebue Sound.
Signal Corps ACS Radio Building	8/06/41	10/26/42	No Change	66°52'	162°38'	12	29	5	5									Instrument shelter 27 feet S of the station. Rain gage 30 feet SW of station and 28 feet from the instrument shelter.
Control Building Federal Aviation Agency Airport + +Later named Ralph Wien Memorial Airport	10/26/42	12/01/97	.75 mi. SSW	66°52'	162°38'	10	31 20 33	5	5	NA	NA	a8	4	b6 e6	NA			First Order Weather Bureau. Instrument shelter over sod within 60 feet of the edge of Kotzebue Sound. a - Installed 11/1/60 and re-moved in 1961. b - Installed 12/6/78. c - Moved 1 mi. S 12/11/80. d - Minor move 11/23/82. e - Type change 10/20/85.
Wien Memorial Airport	12/01/97	Present	NA	66°53'	162°36'	11												ASOS Commissioned 12/01/97

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.
INQUIRIES/COMMENTS CALL: (828) 271-4800

National Climatic Data Center
151 Patton Avenue, Rm 120
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