

NORMALS, MEANS, AND EXTREMES DULUTH (KDLH)

LATITUDE: 46° 50'N **LONGITUDE:** 92° 10'W **ELEVATION (FT):** GRND: 1433 BARO: 1429 **TIME ZONE:** CENTRAL (UTC -6) **WBAN: 14913**

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	18.9	24.0	34.4	49.2	62.2	70.8	76.3	74.3	65.0	51.5	35.6	22.3	48.7
	MEAN DAILY MAXIMUM	91	17.8	22.2	33.3	47.5	61.3	69.7	76.5	74.3	64.4	52.7	35.3	22.5	48.1
	HIGHEST DAILY MAXIMUM	77	52	55	78	88	92	94	97	97	95	86	71	55	97
	YEAR OF OCCURRENCE		1942	2000	1946	1952	2018	1995	2006	1947	1976	1953	1999	1962	JUL 2006
	MEAN OF EXTREME MAXS.	91	37.0	41.5	52.5	70.9	81.7	85.7	88.8	87.3	81.8	73.3	55.0	39.6	66.3
	NORMAL DAILY MINIMUM	30	1.5	6.1	17.5	30.0	40.6	49.3	55.4	54.4	46.1	34.8	21.9	7.3	30.4
	MEAN DAILY MINIMUM	91	0.7	4.2	16.0	29.2	40.0	48.4	55.4	54.4	45.6	35.7	21.5	7.6	29.9
	LOWEST DAILY MINIMUM	77	-39	-39	-29	-5	17	27	35	32	22	8	-23	-34	-39
	YEAR OF OCCURRENCE		1972	1996	1989	1975	1967	1972	1988	1986	1942	1976	1964	1983	FEB 1996
	MEAN OF EXTREME MINS.	91	-24.1	-19.0	-9.3	12.8	27.2	36.4	43.6	41.6	30.5	20.8	0.7	-15.4	12.2
	NORMAL DRY BULB	30	10.2	15.1	25.9	39.6	51.4	60.1	65.8	64.3	55.6	43.2	28.8	14.8	39.6
	MEAN DRY BULB	91	9.3	13.3	24.7	38.4	50.6	59.2	66.0	64.4	55.0	44.2	28.4	15.1	39.1
	MEAN WET BULB	35	8.3	11.2	21.3	31.1	42.6	52.9	58.7	58.0	50.3	37.7	24.9	13.4	34.2
	MEAN DEW POINT	35	7.8	9.9	19.8	29.2	40.8	51.9	58.0	57.3	49.3	36.4	24.0	12.6	33.1
	NORMAL NO. DAYS WITH:														
	MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.0	0.3	0.9	0.3	0.0	0.0	0.0	0.0	1.5
MAXIMUM <= 32	30	27.2	20.7	12.3	1.5	0.0	0.0	0.0	0.0	0.0	0.6	11.5	24.5	98.3	
MINIMUM <= 32	30	30.9	27.2	28.0	17.8	4.2	0.2	0.0	0.0	1.3	11.6	24.9	30.5	176.6	
MINIMUM <= 0	30	14.2	10.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	10.3	39.0	
H/C	NORMAL HEATING DEG. DAYS	30	1699	1399	1210	762	426	179	63	86	298	678	1088	1556	9444
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	4	30	90	66	14	0	0	0	204
RH	NORMAL (PERCENT)		75	73	71	63	63	71	73	76	77	73	77	78	73
	HOURLY 00 LST	30	77	75	75	70	72	81	84	86	85	78	79	80	79
	HOURLY 06 LST	30	79	79	80	76	76	83	87	90	89	83	82	81	82
	HOURLY 12 LST	30	71	67	64	55	53	60	61	64	64	63	71	74	64
	HOURLY 18 LST	30	71	67	64	54	52	59	61	65	69	67	73	75	65
S	PERCENT POSSIBLE SUNSHINE	47	48	53	55	56	57	58	65	61	52	46	35	39	52
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI) THUNDERSTORMS	55 71	2.5 0.1	2.3 0.0	4.3 0.5	3.7 1.5	4.9 3.7	5.9 6.5	4.6 7.7	5.7 6.5	5.2 3.8	4.1 1.3	3.5 0.3	3.6 0.1	50.3 32.0
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	48	5.4	5.2	5.4	5.4	5.3	5.3	4.7	4.7	5.2	5.3	6.0	5.6	5.3
	MIDNIGHT-MIDNIGHT (OKTAS)	32	5.0	5.0	5.2	5.0	4.8	4.8	4.3	4.3	4.7	5.0	5.7	5.4	4.9
	MEAN NO. DAYS WITH:														
	CLEAR	48	7.4	7.3	7.0	6.2	6.2	5.1	6.7	7.2	6.3	6.4	4.4	6.0	76.2
PARTLY CLOUDY	48	7.0	6.2	6.9	7.9	9.6	11.0	12.7	11.9	8.4	7.6	5.5	5.8	100.5	
CLOUDY	48	16.7	14.7	17.0	15.9	15.2	13.9	10.9	11.3	14.6	16.4	19.5	18.6	184.7	
PR	MEAN STATION PRESSURE(IN)	35	28.45	28.48	28.49	28.44	28.44	28.42	28.46	28.49	28.48	28.45	28.45	28.45	28.46
	MEAN SEA-LEVEL PRES. (IN)	35	30.06	30.07	30.07	29.99	29.96	29.93	29.96	30.00	30.01	29.99	30.01	30.05	30.01
WINDS	MEAN SPEED (MPH)	35	10.6	10.5	10.6	11.1	10.4	9.3	8.5	8.5	9.5	10.4	10.5	10.4	10.0
	PREVAIL.DIR(TENS OF DEGS)	44	31	31	10	09	10	11	31	12	31	31	31	31	31
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	22	38	44	47	46	44	44	43	53	47	39	44	41	53
	DIR. (TENS OF DEGS)		27	29	08	08	28	10	32	28	27	31	08	28	28
	YEAR OF OCCURRENCE		2013	2002	1998	2003	2002	2013	2016	2016	2017	2006	1998	2001	AUG 2016
	MAXIMUM 3-SECOND														
SPEED (MPH)	22	52	56	60	62	54	54	69	67	61	51	55	56	69	
DIR. (TENS OF DEGS)		28	10	26	07	24	10	29	28	27	32	09	31	29	
YEAR OF OCCURRENCE		2009	2012	2017	2008	2012	2013	2016	2016	2017	2018	1998	1999	JUL 2016	
PRECIPITATION	NORMAL (IN)	30	0.96	0.81	1.49	2.43	3.23	4.23	3.85	3.70	4.11	2.85	2.09	1.21	30.96
	MAXIMUM MONTHLY (IN)	77	4.70	2.72	5.12	8.18	7.67	10.03	8.74	10.31	9.38	7.53	5.08	3.70	10.31
	YEAR OF OCCURRENCE		1969	1998	1965	2001	1962	2012	1999	1972	1991	1949	2000	2015	AUG 1972
	MINIMUM MONTHLY (IN)	77	0.13	0.13	0.22	0.24	0.15	0.55	.82	0.71	0.19	0.13	0.19	0.13	0.13
	YEAR OF OCCURRENCE		2008	1988	1959	1987	1976	1995	2005	1970	1952	1944	1976	1997	JAN 2008
	MAXIMUM IN 24 HOURS (IN)	77	1.74	1.38	2.38	2.60	3.93	6.99	3.68	5.79	3.77	2.94	2.64	2.12	6.99
	YEAR OF OCCURRENCE		1975	1965	1977	2001	2010	2012	1987	1978	1972	2010	1968	1950	JUN 2012
	NORMAL NO. DAYS WITH:														
PRECIPITATION >= 0.01	30	10.3	8.5	9.7	10.6	12.3	12.6	11.8	10.8	12.3	11.3	10.7	10.5	131.4	
PRECIPITATION >= 1.00	30	0.0	0.1	0.1	0.3	0.5	0.9	1.0	1.1	1.1	0.5	0.4	0.1	6.1	
SNOWFALL	NORMAL (IN)	30	19.4	12.4	13.2	6.9	0.4	0.0	0.0	0.0	0.1	2.3	13.7	17.7	86.1
	MAXIMUM MONTHLY (IN)	75	46.8	32.1	45.5	50.8	8.1	0.2	T	T	2.4	11.1	50.1	44.3	50.8
	YEAR OF OCCURRENCE		1969	2001	1965	2013	1954	1945	2018	2018	1991	2017	1991	1950	APR 2013
	MAXIMUM IN 24 HOURS (IN)	75	23.2	17.0	19.4	12.7	4.4	0.2	T	T	2.4	10.6	24.1	25.4	25.4
	YEAR OF OCCURRENCE'		2004	1948	1965	2018	2010	1945	2018	2018	1991	2017	1991	1950	DEC 1950
	MAXIMUM SNOW DEPTH (IN)	70	42	38	48	41	9	0	0	0	0	8	30	32	48
	YEAR OF OCCURRENCE		1969	1969	1965	1965	1950					2017	1991	1983	MAR 1965
NORMAL NO. DAYS WITH:															
SNOWFALL >= 1.0	30	4.5	3.8	3.6	1.8	0.1	0.0	0.0	0.0	0.0	0.8	3.8	5.0	23.4	