

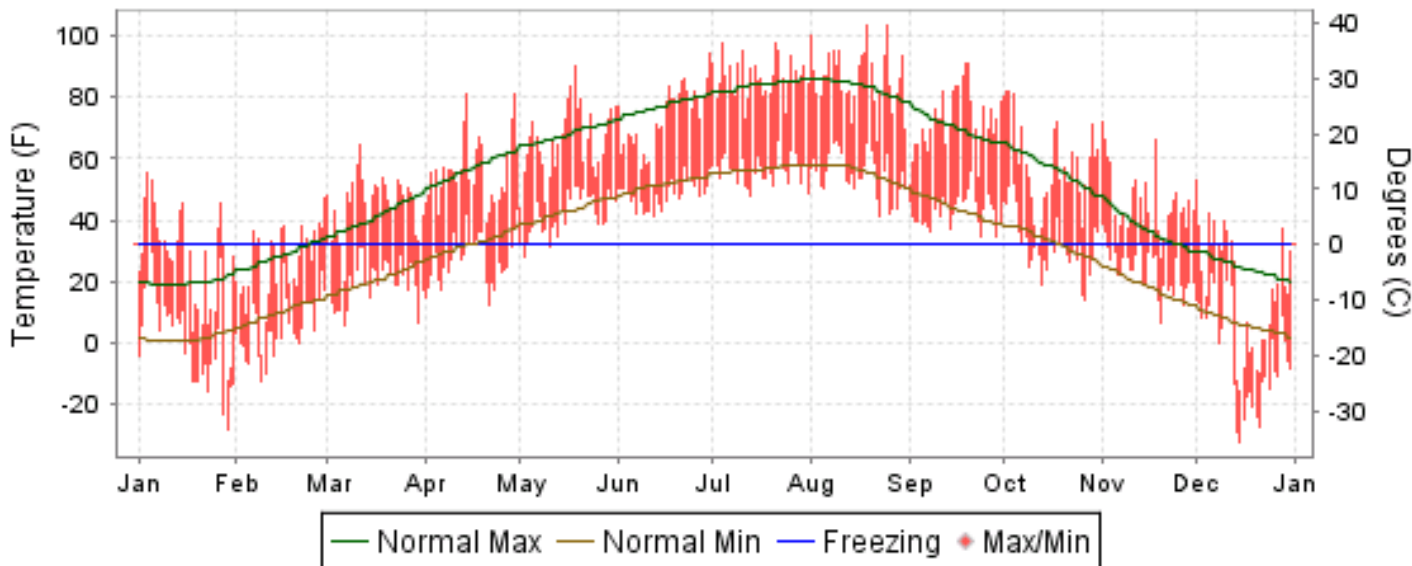


# 2008 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

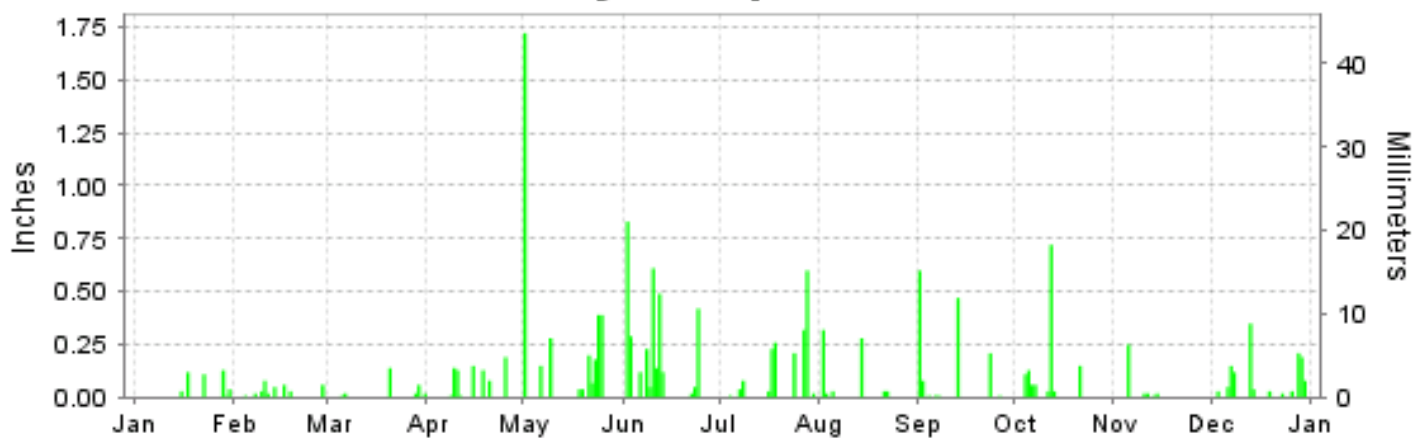
ISSN 0198-2966

## GLASGOW, MONTANA (KGGW)

### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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CLIMATIC DATA CENTER  
ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2008

## GLASGOW (KGGW)

**LATITUDE:**  
48° 12'N

**LONGITUDE:**  
-106° 37'W

**ELEVATION (FT):**  
GRND: 2285 BARO: 2271

**TIME ZONE:**  
MOUNTAIN (UTC -7)

**WBAN: 94008**

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	26.4	26.3	45.4	55.8	65.9	72.9	86.2	86.1	72.2	57.9	45.2	17.5	54.8	
	HIGHEST DAILY MAXIMUM	55	47	64	81	90	94	97	103	91	82	72	53	103	
	DATE OF OCCURRENCE	04	29	11	29+	18	30	21+	25+	20+	03+	01	01	AUG 25+	
	MEAN DAILY MINIMUM	1.3	5.2	20.1	27.1	41.9	48.6	56.2	55.0	43.1	32.0	23.5	-3.1	29.2	
	LOWEST DAILY MINIMUM	-28	-12	6	12	28	41	48	41	35	14	7	-32	-32	
	DATE OF OCCURRENCE	29	09	06	21	02	12	13	23	29+	27	20	15	DEC 15	
	AVERAGE DRY BULB	13.9	15.8	32.8	41.5	53.9	60.8	71.2	70.6	57.7	45.0	34.4	7.2	42.1	
	MEAN WET BULB	11.2	14.6	27.7	34.5	45.9	53.0	58.3	57.1	48.5	38.6	30.3	8.3	35.7	
	MEAN DEW POINT	5.1	10.9	19.3	24.0	37.5	46.6	48.4	46.7	40.5	31.1	25.2	4.2	28.3	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	1	1	10	13	2	0	0	0	0	27
	MAXIMUM <= 32°	19	18	2	0	0	0	0	0	0	1	2	23	65	
	MINIMUM <= 32°	31	29	30	21	4	0	0	0	0	18	28	31	192	
MINIMUM <= 0°	15	9	0	0	0	0	0	0	0	0	0	17	41		
H/C	HEATING DEGREE DAYS	1577	1420	993	699	343	155	3	30	229	616	911	1782	8758	
	COOLING DEGREE DAYS	0	0	0	0	6	35	203	209	15	4	0	0	472	
RH	MEAN (PERCENT)	70	81	63	55	58	64	49	47	60	63	73	78	63	
	HOUR 05 LST	76	85	80	74	73	79	72	69	81	80	85	81	78	
	HOUR 11 LST	66	77	51	40	46	50	34	33	44	49	62	73	52	
	HOUR 17 LST	65	77	49	39	44	49	28	31	43	57	68	79	52	
	HOUR 23 LST	74	83	74	65	68	74	61	58	68	70	81	81	71	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	3	6	4	2	1	0	0	0	2	1	0	4	23	
	THUNDERSTORMS	0	0	0	1	3	8	9	1	0	1	0	0	23	
CLOUDNESS	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.)	27.47	27.51	27.55	27.50	27.50	27.48	27.50	27.47	27.61	27.64	27.58	27.53	27.53	
	MEAN SEA-LEVEL PRESS. (IN.)	30.01	30.04	30.03	29.94	29.91	29.87	29.86	29.85	30.03	30.10	30.06	30.08	29.98	
WINDS	RESULTANT SPEED (MPH)	0.7	1.4	1.4	0.9	4.4	1.0	1.0	1.1	1.3	0.3	1.4	2.4	1.1	
	RES. DIR. (TENS OF DEGS.)	11	06	33	31	07	36	35	05	04	09	35	36	03	
	MEAN SPEED (MPH)	9.1	8.5	10.2	11.1	12.1	10.0	10.0	10.5	8.1	9.8	9.6	10.3	9.9	
	PREVAIL.DIR.(TENS OF DEGS.)	11	12	12	32	10	11	30	11	11	11	11	11	11	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	37	36	48	48	41	37	39	41	30	36	35	38	48	
	DIR. (TENS OF DEGS.)	33	29	30	12	11	25	32	28	35	31	32	03	12	
	DATE OF OCCURRENCE	15	13	24	29	23	07	11	26	26	26	14	13	APR 29	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	46	43	62	59	62	48	49	52	38	45	44	49	62	
DIR. (TENS OF DEGS.)	32	29	29	12	28	30	31	30	36	33	32	05	28		
DATE OF OCCURRENCE	15	13	24	29	18	27	11	26	26	25	14	13	MAY 18		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.44	0.36	0.27	0.84	3.46	3.37	1.80	0.71	1.40	1.29	0.32	1.30	15.56	
	GREATEST 24-HOUR (IN.)	0.13	0.08	0.14	0.27	1.72	0.83	0.92	0.32	0.60	0.74	0.25	0.37	1.72	
	DATE OF OCCURRENCE	28	10	20	09-10	01	02	27-28	02	01	12-13	05	13-14	MAY 01	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	6	9	6	8	10	12	10	6	8	8	5	12	100	
PRECIPITATION 0.10	3	0	1	5	7	9	5	2	3	4	1	5	45		
PRECIPITATION 1.00	0	0	0	0	1	0	0	0	0	0	0	0	1		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	11.6	5.0	4.1	0.8	1.8	0.0	0.0	0.0	0.0	13.6	0.1	24.8	61.8	
	GREATEST 24-HOUR (IN.)	3.9	1.5	3.0	0.8	1.8	0.0	0.0	0.0	0.0	12.8	0.1	10.0	12.8	
	DATE OF OCCURRENCE	28	10	29	20	01					12	14	13	OCT 12	
	MAXIMUM SNOW DEPTH (IN.)	5	4	2	0	1	0	0	0	0	11	T	7	11	
	DATE OF OCCURRENCE	29+	12+	30+		02+					13	14	30	OCT 13	
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0	4	1	1	0	1	0	0	0	0	1	0	9	17		

# NORMALS, MEANS, AND EXTREMES GLASGOW (KGGW)

LATITUDE: 48° 12'N      LONGITUDE: -106° 37'W      ELEVATION (FT): GRND: 2285    BARO: 2271      TIME ZONE: MOUNTAIN (UTC -7)      WBAN: 94008

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	19.9	28.3	41.3	56.7	67.9	77.1	83.8	83.3	70.4	57.1	37.4	24.8	54.0
	MEAN DAILY MAXIMUM	61	20.5	27.5	39.6	56.4	67.9	76.6	85.0	83.9	71.5	58.3	39.9	26.8	54.5
	HIGHEST DAILY MAXIMUM	53	61	71	79	91	102	108	106	108	103	90	79	62	108
	YEAR OF OCCURRENCE		2002	1992	1993	1980	1988	2007	1983	1983	1992	1999	2004	2004	JUN 1988
	MEAN OF EXTREME MAXS.	61	44.7	49.3	63.5	78.3	87.8	93.8	99.3	98.8	91.6	80.9	63.1	49.4	75.0
	NORMAL DAILY MINIMUM	30	1.8	9.9	20.6	32.2	43.0	51.6	56.6	55.7	44.1	33.0	18.5	6.4	31.1
	MEAN DAILY MINIMUM	61	1.4	7.6	18.1	31.5	42.4	51.1	56.9	55.6	44.3	32.9	19.0	7.5	30.7
	LOWEST DAILY MINIMUM	53	-47	-38	-27	-3	20	32	41	37	15	-6	-26	-38	-47
	YEAR OF OCCURRENCE		1969	1996	2002	1975	2002	1998	1977	1994	1995	1991	1985	1989	JAN 1969
	MEAN OF EXTREME MINS.	61	-22.2	-16.0	-5.8	15.6	29.1	40.1	47.0	43.5	29.9	16.4	-2.3	-17.8	13.1
	NORMAL DRY BULB	30	10.8	19.1	30.9	44.5	55.5	64.4	70.2	69.5	57.3	45.0	27.9	15.6	42.6
	MEAN DRY BULB	61	11.0	17.6	28.9	43.9	55.2	63.9	71.0	69.8	57.9	45.7	29.5	17.1	42.6
	MEAN WET BULB	25	12.7	17.0	26.8	36.6	45.9	54.0	57.8	55.7	47.2	37.1	24.7	15.5	35.9
	MEAN DEW POINT	25	9.8	13.4	22.1	29.2	38.5	48.0	51.2	48.3	40.1	30.9	20.9	12.2	30.4
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	*	0.8	3.2	8.7	9.2	1.5	0.1	0.0	0.0	23.5
	MAXIMUM <= 32	30	22.1	14.7	7.1	0.9	0.0	0.0	0.0	0.0	0.0	0.9	9.3	18.6	73.6
MINIMUM <= 32	30	30.9	27.5	28.0	15.0	2.2	*	0.0	0.0	2.0	12.9	27.2	30.8	176.5	
MINIMUM <= 0	30	13.8	7.9	2.0	*	0.0	0.0	0.0	0.0	0.0	0.2	2.8	9.9	36.6	
H/C	NORMAL HEATING DEG. DAYS	30	1671	1290	1055	610	308	91	22	38	253	609	1097	1516	8560
	NORMAL COOLING DEG. DAYS	30	0	0	0	1	17	80	185	182	28	1	0	0	494
RH	NORMAL (PERCENT)	30	77	75	70	56	56	57	52	49	54	62	73	76	63
	HOURLY 05 LST	30	78	80	81	75	75	77	74	70	72	75	80	79	76
	HOURLY 11 LST	30	74	72	64	49	46	47	43	41	47	54	69	74	57
	HOURLY 17 LST	30	74	70	58	41	40	40	34	31	38	47	66	74	51
	HOURLY 23 LST	30	78	79	76	65	64	65	60	55	61	67	76	78	69
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	42	3.1	2.8	2.2	0.9	0.5	0.4	0.2	0.1	0.4	1.0	2.1	2.9	16.6
	THUNDERSTORMS	58	0.0	0.0	0.1	0.5	3.4	6.9	7.8	5.9	1.6	0.2	0.0	0.0	26.4
CLOUDNESS	MEAN: SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH: CLEAR														
	PARTLY CLOUDY CLOUDY														
PR	MEAN STATION PRESSURE(IN)	25	27.58	27.59	27.56	27.53	27.50	27.51	27.55	27.56	27.56	27.57	27.56	27.57	27.55
	MEAN SEA-LEVEL PRES. (IN)	25	30.11	30.11	30.04	29.97	29.91	29.89	29.92	29.93	29.97	30.02	30.05	30.09	30.00
WINDS	MEAN SPEED (MPH)	25	9.4	9.7	11.2	12.0	12.3	11.2	10.4	10.9	10.6	10.5	9.7	9.5	10.6
	PREVAIL.DIR.(TENS OF DEGS)	21	12	12	12	11	12	11	11	12	11	12	12	12	12
	MAXIMUM 2-MINUTE: SPEED (MPH)	14	56	46	48	54	44	54	68	66	46	54	52	54	68
	DIR. (TENS OF DEGS)		28	31	30	30	32	30	28	23	29	29	28	29	28
	YEAR OF OCCURRENCE		2003	2004	2008	1996	2001	2002	2000	1997	1997	1999	2007	1995	JUL 2000
	MAXIMUM 3-SECOND SPEED (MPH)	14	66	56	62	67	62	66	82	76	54	66	68	66	82
	DIR. (TENS OF DEGS)		30	28	29	29	28	29	28	23	29	30	28	31	28
YEAR OF OCCURRENCE		2003	2002	2008	1996	2008	2002	2000	1997	2005	1999	2007	2000	JUL 2000	
PRECIPITATION	NORMAL (IN)	30	0.35	0.26	0.47	0.75	1.72	2.20	1.78	1.25	0.98	0.71	0.39	0.37	11.23
	MAXIMUM MONTHLY (IN)	53	1.24	0.97	1.27	1.99	6.61	5.36	5.93	5.74	4.14	3.05	1.53	1.30	6.61
	YEAR OF OCCURRENCE		1969	2006	1987	1969	2007	1963	1993	1985	1978	1998	1996	2008	MAY 2007
	MINIMUM MONTHLY (IN)	53	T	.03	0.05	0.07	0.03	0.09	0.01	0.03	0.04	T	T	0.01	T
	YEAR OF OCCURRENCE		1973	2005	1957	1956	1958	1985	1984	2001	1960	1965	1969	1997	JAN 1973
	MAXIMUM IN 24 HOURS (IN)	53	0.37	0.64	0.94	1.16	2.36	2.64	3.98	4.99	1.98	1.37	0.63	0.37	4.99
	YEAR OF OCCURRENCE		1969	2006	1987	1969	2007	2007	1962	1985	1978	1998	2000	2008	AUG 1985
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	8.4	6.1	8.0	7.2	10.4	11.0	8.1	7.6	6.4	4.9	6.6	7.9	92.6
PRECIPITATION >= 1.00	30	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	1.3	
SNOWFALL	NORMAL (IN)	30	6.7	4.2	4.6	2.2	0.7	0.*	0.0	0.0	0.2	1.0	4.5	6.7	30.8
	MAXIMUM MONTHLY (IN)	53	32.9	15.9	14.9	13.7	10.7	T	T	T	2.2	13.6	23.3	24.8	32.9
	YEAR OF OCCURRENCE		2004	1979	1987	1970	1983	1994	1989	1994	1983	2008	1996	2008	JAN 2004
	MAXIMUM IN 24 HOURS (IN)	53	8.8	4.7	10.9	10.8	10.1	T	T	T	2.1	5.3	10.5	7.8	10.9
	YEAR OF OCCURRENCE		1971	1979	1987	1995	1983	1994	1989	1994	1983	1975	1993	2003	MAR 1987
	MAXIMUM SNOW DEPTH (IN)	50	24	29	21	9	10	0	0	0	2	11	13	15	29
	YEAR OF OCCURRENCE		2004	2004	2004	1965	1983				1984	2008	1996	1996	FEB 2004
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	2.2	1.6	1.4	0.6	0.2	0.0	0.0	0.0	0.1	0.3	1.2	1.9	9.5	

**PRECIPITATION (inches) 2008 GLASGOW (KGGW)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	0.15	0.74	0.43	1.27	2.46	0.48	0.75	0.76	0.27	0.57	0.18	0.05	8.11
1980	0.50	0.14	0.36	0.22	0.46	2.55	0.44	1.36	0.87	1.35	0.20	0.50	8.95
1981	0.06	0.10	0.31	0.19	2.13	1.83	1.72	0.23	0.08	1.40	0.55	0.19	8.79
1982	0.75	0.43	0.72	0.22	3.74	1.03	0.97	1.19	0.98	1.09	0.06	1.03	12.21
1983	0.18	0.24	0.39	0.10	1.59	0.77	2.62	0.03	0.97	0.24	0.16	0.27	7.56
1984	0.43	0.20	0.68	0.10	0.78	1.99	0.01	0.43	0.81	0.57	0.18	0.56	6.74
1985	0.05	0.05	0.27	0.91	2.34	0.09	0.69	5.74	0.83	0.64	0.74	0.50	12.85
1986	0.31	0.55	0.32	0.41	2.49	1.60	1.55	0.83	3.81	0.86	0.57	0.10	13.40
1987	0.08	0.11	1.27	0.45	1.73	1.07	2.90	0.88	0.66	0.03	0.03	0.03	9.24
1988	0.45	0.24	0.22	0.33	1.33	1.54	1.28	0.47	0.95	0.14	0.11	0.42	7.48
1989	0.63	0.60	0.36	1.62	2.09	0.95	0.95	1.48	0.20	0.61	0.47	0.35	10.31
1990	0.32	0.09	0.29	0.71	0.94	1.13	0.64	1.45	0.12	0.14	0.48	0.53	6.84
1991	0.21	0.32	0.62	1.29	1.29	4.13	1.32	0.49	0.61	0.13	0.42	0.15	10.98
1992	0.25	0.04	0.45	0.39	0.67	3.15	1.35	0.90	0.41	0.74	0.65	0.24	9.24
1993	0.20	0.34	0.82	0.43	0.50	1.96	5.93	4.31	0.60	0.47	0.58	0.13	16.27
1994	0.72	0.33	0.16	0.60	1.92	2.58	0.36	0.86	0.26	1.80	0.11	0.15	9.85
1995	0.23	0.06	0.84	1.44	0.79	4.79	2.11	0.95	0.16	1.02	0.37	0.41	13.17
1996	0.50	0.11	0.33	0.38	1.29	2.03	0.63	0.09	2.94	0.06	1.53	0.51	10.40
1997	0.31	0.04	0.49	1.79	0.82	1.36	2.71	2.63	0.55	0.76	0.28	0.01	11.75
1998	0.26	0.15	0.73	1.42	1.02	4.11	1.40	0.48	0.92	3.05	0.68	0.60	14.82
1999	0.83	0.56	0.28	1.38	3.22	2.51	2.22	1.26	1.06	0.41	0.36	0.20	14.29
2000	0.23	0.25	0.54	1.05	2.56	3.66	2.73	0.26	0.94	0.71	0.88	0.37	14.18
2001	0.18	0.14	0.05	0.57	0.77	4.89	5.29	T	0.40	0.28	0.11	0.01	12.69
2002	0.38	0.11	0.40	0.73	1.04	3.35	2.31	2.58	0.99	0.29	0.15	0.02	12.35
2003	0.29	0.24	0.44	1.24	1.70	1.96	1.47	0.86	0.78	0.56	0.44	0.82	10.80
2004	1.02	0.37	0.20	0.59	3.15	2.34	2.09	1.07	0.28	0.47	0.30	0.59	12.47
2005	0.17	0.03	0.61	1.39	0.80	3.78	0.29	0.88	0.63	0.55	0.63	0.37	10.13
2006	0.30	0.97	0.22	1.16	1.88	0.92	0.33	0.48	2.40	1.26	0.40	0.29	10.61
2007	0.08	0.36	0.09	1.06	6.61	3.28	0.68	0.23	0.96	1.56	0.09	0.05	15.05
2008	0.44	0.36	0.27	0.84	3.46	3.37	1.80	0.71	1.40	1.29	0.32	1.30	15.56
POR= 61 YRS	0.42	0.33	0.43	0.84	1.81	2.49	1.67	1.28	0.93	0.64	0.37	0.40	11.61

WBAN : 94008

**AVERAGE TEMPERATURE (°F) 2008 GLASGOW (KGGW)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1979	-4.3	1.5	23.4	36.3	50.4	64.3	72.2	69.7	62.5	49.0	26.9	26.5	39.9
1980	7.3	16.4	27.9	51.9	61.1	66.1	72.3	64.7	57.8	47.7	36.3	18.2	44.0
1981	25.3	25.8	38.9	48.2	56.8	60.6	71.7	73.1	60.8	44.1	37.1	17.7	46.7
1982	-5.1	9.8	24.6	40.6	51.2	62.3	69.7	69.3	56.8	45.2	25.7	19.0	39.1
1983	20.6	27.1	33.6	43.1	51.7	63.4	71.8	76.5	55.3	47.7	32.9	-3.2	43.4
1984	18.6	34.3	31.9	47.6	55.5	64.6	74.6	74.4	51.8	42.0	30.0	6.9	44.4
1985	8.5	14.9	33.6	48.6	58.9	60.6	72.3	64.6	50.5	43.1	9.7	12.8	39.8
1986	22.1	10.5	40.4	43.6	55.9	69.0	69.1	69.4	52.2	48.3	25.1	24.9	44.2
1987	24.0	31.0	33.3	52.1	59.8	68.1	70.3	64.6	60.5	44.9	36.9	25.2	47.6
1988	10.2	18.3	35.6	47.0	62.5	76.8	73.6	70.5	57.6	46.8	29.1	19.0	45.6
1989	14.3	3.7	22.9	43.5	55.4	63.9	75.1	70.2	58.4	45.5	31.9	14.3	41.6
1990	23.2	22.5	35.3	43.9	55.3	66.1	70.6	72.0	64.0	45.3	30.9	10.0	44.9
1991	8.0	31.9	33.8	45.7	56.3	65.5	71.3	75.0	58.9	41.9	27.7	24.9	45.1
1992	26.6	30.5	39.3	46.1	57.8	65.2	64.1	66.2	56.8	45.9	31.7	13.0	45.3
1993	4.9	7.5	34.4	45.8	57.8	61.2	62.7	64.5	54.4	44.8	25.1	23.3	40.5
1994	7.6	5.1	36.3	44.6	57.7	63.0	70.1	70.7	62.6	45.2	29.6	20.4	42.7
1995	13.2	25.0	29.5	38.6	52.5	64.7	68.2	69.8	57.1	44.3	27.0	11.5	41.8
1996	-5	17.7	18.9	42.6	50.0	65.3	70.3	72.6	55.6	43.2	16.5	6.1	38.2
1997	3.0	18.8	27.2	40.2	53.6	67.7	69.8	69.9	62.8	45.3	29.3	26.1	42.8
1998	10.5	32.3	27.4	48.0	57.7	59.6	73.9	74.8	65.8	46.9	33.2	17.7	45.7
1999	12.6	26.2	35.3	44.9	53.2	61.9	68.1	70.9	54.2	45.9	39.9	29.1	45.2
2000	16.9	22.2	36.3	44.2	56.0	60.8	72.5	70.6	58.1	45.9	18.4	8.0	42.5
2001	20.0	8.1	32.7	45.0	57.0	62.2	71.0	72.9	61.6	44.4	36.1	20.0	44.3
2002	18.0	24.6	13.1	38.3	50.0	63.9	73.3	65.4	59.3	36.0	33.8	23.7	41.6
2003	16.2	15.2	26.3	48.0	54.4	63.0	74.4	76.2	57.0	50.2	20.3	19.5	43.4
2004	6.3	13.6	34.1	47.5	50.9	58.6	69.1	64.6	58.9	43.6	32.7	23.4	41.9
2005	7.1	26.0	35.5	47.7	52.5	64.1	72.3	68.6	60.1	46.7	33.8	15.9	44.2
2006	29.2	21.0	30.4	48.9	57.9	66.5	77.2	71.7	57.8	40.1	28.9	21.5	45.9
2007	19.0	14.9	39.1	43.6	56.0	65.9	78.4	70.4	58.6	46.5	31.1	19.1	45.2
2008	13.9	15.8	32.8	41.5	53.9	60.8	71.2	70.6	57.7	45.0	34.4	7.2	42.1
POR= 61 YRS	11.0	17.6	28.9	43.9	55.2	63.9	71.0	69.8	57.9	45.7	29.5	17.1	42.6

**HEATING DEGREE DAYS (base 65°F) 2008 GLASGOW (KGGW)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1979-80	6	17	114	489	1139	1187	1788	1404	1145	398	175	49	7911
1980-81	2	63	232	536	854	1446	1225	1091	799	499	250	145	7142
1981-82	10	6	169	639	834	1459	2171	1546	1246	728	418	121	9347
1982-83	16	39	271	607	1171	1417	1369	1055	969	649	412	97	8072
1983-84	16	5	322	528	956	2113	1431	885	1018	515	318	85	8192
1984-85	0	20	406	705	1042	1797	1754	1400	967	485	218	156	8950
1985-86	11	84	429	673	1657	1617	1324	1524	754	638	320	18	9049
1986-87	15	15	379	513	1192	1237	1262	948	975	397	185	40	7158
1987-88	26	71	160	619	833	1227	1698	1353	903	535	143	13	7581
1988-89	0	10	244	557	1072	1422	1568	1712	1299	641	297	99	8921
1989-90	0	24	209	596	982	1569	1287	1186	912	626	316	99	7806
1990-91	10	5	119	605	1017	1704	1767	921	962	572	273	29	7984
1991-92	3	11	215	709	1114	1237	1185	995	788	564	254	94	7169
1992-93	65	94	256	594	990	1612	1861	1610	940	570	240	143	8975
1993-94	91	82	322	617	1194	1286	1777	1674	884	605	226	102	8860
1994-95	13	36	106	606	1056	1376	1598	1116	1095	785	389	99	8275
1995-96	23	22	260	632	1136	1654	2031	1366	1423	669	459	70	9745
1996-97	6	3	289	668	1450	1817	1917	1288	1165	735	351	24	9713
1997-98	34	35	110	615	1066	1198	1682	912	1157	505	235	181	7730
1998-99	0	0	121	557	946	1459	1617	1078	913	595	365	123	7774
1999-00	41	11	320	583	743	1104	1488	1235	883	614	272	151	7445
2000-01	2	28	224	583	1391	1761	1388	1585	997	600	257	129	8945
2001-02	6	6	144	629	860	1389	1450	1128	1602	793	470	128	8605
2002-03	2	66	212	890	930	1276	1506	1389	1192	506	342	127	8438
2003-04	3	13	298	458	1335	1404	1814	1481	950	520	429	210	8915
2004-05	28	64	197	657	962	1282	1788	1088	909	513	382	83	7953
2005-06	7	50	194	562	929	1517	1102	1229	1068	475	256	34	7423
2006-07	0	12	247	763	1075	1344	1421	1396	798	636	284	52	8028
2007-08	1	24	234	566	1012	1416	1577	1420	993	699	343	155	8440
2008-	3	30	229	616	911	1782							

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**COOLING DEGREE DAYS (base 65°F) 2008 GLASGOW (KGGW)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1979	0	0	0	0	8	70	236	170	48	1	0	0	533
1980	0	0	0	12	60	88	234	59	23	7	0	0	483
1981	0	0	0	0	2	22	227	265	48	0	0	0	564
1982	0	0	0	0	0	44	168	180	32	0	0	0	424
1983	0	0	0	0	7	54	234	369	40	0	0	0	704
1984	0	0	0	0	30	78	303	318	15	0	0	0	744
1985	0	0	0	0	33	29	242	78	3	0	0	0	385
1986	0	0	0	0	44	142	150	161	0	0	0	0	497
1987	0	0	0	15	29	139	198	63	29	4	0	0	477
1988	0	0	0	0	73	374	273	187	27	0	0	0	934
1989	0	0	0	1	4	74	318	193	17	0	0	0	607
1990	0	0	0	2	22	138	192	231	96	0	0	0	681
1991	0	0	0	0	11	54	205	329	36	1	0	0	636
1992	0	0	0	5	38	107	44	138	17	8	0	0	357
1993	0	0	0	0	21	37	27	75	7	0	0	0	167
1994	0	0	0	0	5	51	178	218	42	0	0	0	494
1995	0	0	0	0	8	100	128	179	31	1	0	0	447
1996	0	0	0	0	0	86	177	245	9	0	0	0	517
1997	0	0	0	0	8	114	189	193	52	8	0	0	564
1998	0	0	0	0	15	26	280	311	150	0	0	0	782
1999	0	0	0	0	7	39	147	201	5	0	0	0	399
2000	0	0	0	0	1	29	240	210	24	0	0	0	504
2001	0	0	0	6	19	51	199	256	46	0	0	0	577
2002	0	0	0	0	11	102	266	83	51	0	0	0	513
2003	0	0	0	0	20	71	300	367	66	5	0	0	829
2004	0	0	0	1	0	24	161	59	20	0	0	0	265
2005	0	0	0	0	1	63	242	171	53	0	0	0	530
2006	0	0	0	0	43	87	385	225	39	0	0	0	779
2007	0	0	0	0	9	85	424	198	49	0	0	0	765
2008	0	0	0	0	6	35	203	209	15	4	0	0	472

## SNOWFALL (inches) 2008 GLASGOW (KGGW)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1979-80	0.0	0.0	0.0	T	2.7	0.4	9.4	1.3	2.6	0.7	0.0	0.0	17.1
1980-81	0.0	0.0	0.0	3.1	1.0	11.0	1.1	0.8	0.1	T	0.0	0.0	17.1
1981-82	0.0	0.0	0.0	4.4	1.8	2.9	16.4	7.3	7.5	1.7	T	0.0	42.0
1982-83	0.0	0.0	1.5	0.6	0.4	11.2	1.1	1.3	3.5	0.1	10.7	0.0	30.4
1983-84	0.0	0.0	2.2	T	1.8	4.7	4.2	1.6	4.3	1.1	0.2	0.0	20.1
1984-85	0.0	0.0	2.0	4.2	1.7	12.7	1.0	0.7	4.6	1.7	0.0	0.0	28.6
1985-86	0.0	0.0	0.2	2.2	13.0	9.1	3.5	9.8	2.3	4.9	T	0.0	45.0
1986-87	0.0	0.0	0.0	T	6.3	0.1	1.8	1.5	14.9	1.2	T	0.0	25.8
1987-88	0.0	0.0	0.0	0.2	0.2	0.4	8.6	3.6	0.2	0.1	0.0	0.0	13.3
1988-89	0.0	0.0	0.0	T	1.2	10.2	14.8	9.4	4.4	0.7	T	T	40.7
1989-90	T	T	T	T	2.8	9.2	5.7	1.6	3.6	1.4	T	T	24.3
1990-91	0.0	0.0	0.0	0.1	3.7	8.4	3.8	3.4	9.0	4.1	1.7	0.0	34.2
1991-92	0.0	0.0	0.0	1.2	0.9	2.0	1.0	1.3	0.2	2.3	T	T	8.9
1992-93	0.0	0.0	T	0.6	2.5	5.4	5.5	7.8	1.1	T	0.0	T	22.9
1993-94	0.0	T	0.0	0.1	13.9	1.2	18.0	8.6	1.2	1.4	T	T	44.4
1994-95	0.0	T	0.0	T	0.6	2.1	4.5	1.4	6.3	0.0	0.0	0.0	14.9
1995-96	0.0	0.0	0.0	0.2	2.1	6.7	11.8	3.3	12.2	0.7	0.0	0.0	44.4
1996-97	T	0.0	0.0	0.1	23.3	14.5	5.5	1.3	6.7	2.3	0.0	0.0	53.7
1997-98	0.0	T	T	1.6	3.3	0.1	5.6	0.1	9.4	0.0	0.0	T	20.1
1998-99	0.0	0.0	0.0	0.0	6.6	15.4	15.0	6.2	5.4	1.6	6.8	0.0	57.0
1999-00	T	0.0	0.0	0.3	0.9	3.4	5.0	6.7	3.5	8.4	2.0	T	30.2
2000-01	T	T	T	T	16.9	8.6	3.3	5.0	1.3	1.1	T	0.0	36.2
2001-02	T	0.0	0.0	0.4	2.6	0.6	5.9	3.5	12.9	0.2	7.6	0.0	33.7
2002-03	0.0	T	0.0	0.0	0.0	0.0	8.0	7.1	9.7	3.7	T	0.0	44.4
2003-04	0.0	T	0.0	1.1	8.8	18.8	32.9	3.1	3.0	T	3.0	0.0	70.7
2004-05	0.0	0.0	0.0	0.2	2.4	10.3	7.4	0.9	6.8	0.5	T	0.0	28.5
2005-06	0.0	0.0	0.0	T	6.5	6.5	5.1	4.9	2.8	0.1	T	0.0	25.9
2006-07	0.0	0.0	T	5.4	8.1	5.5	2.0	10.1	T	3.9	0.0	0.0	35.0
2007-08	0.0	0.0	0.0	0.0	1.3	0.9	11.6	5.0	4.1	0.8	1.8	0.0	25.5
2008-	0.0	0.0	0.0	13.6	0.1	24.8							
POR= 61 YRS	T	T	0.2	1.3	3.9	6.2	7.6	4.9	4.6	2.9	0.9	T	32.5

WBAN : 94008

### 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 (1971 - 2000). 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. 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 EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p> <p><b>NOTE:</b> The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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# 2008 GLASGOW MONTANA (KGGW)

Founded in the days of national expansion as a railroad shop town, Glasgow is situated in the valley of the Milk River, about 20 miles upstream from where the Milk River joins the Missouri. It lies on the natural route from the plains to Marias Pass in the northern Rockies. The city is located on the valley floor at an average elevation of about 2,100 feet above sea level. Hills rise sharply from the northern edge of the city to flat tableland about 200 feet higher than the valley. The Weather Service Office is located on this flat land about 1 mile north-northeast of the city. A gradual incline commences 3 to 4 miles to the south and southwest of the city and reaches to the rolling hills which separate the Milk River drainage from the Fort Peck Reservoir on the Missouri. The northern shore of Fort Peck Reservoir lies about 15 miles south of Glasgow. This is a body of water impounded by Fort Peck Dam which was completed in 1939. The dam, at full capacity, backs water up the Missouri Valley for over 180 miles. The shape of the reservoir is very irregular, but its average width south of Glasgow is about 10 miles.

The climate in the Glasgow area is continental with a large annual range in temperature and limited precipitation. Fort Peck Reservoir, to the south, seems to have little climatic effect as far north as Glasgow, except for brief periods of morning fog in the late fall which occasionally drift northward from the lake before it freezes. Seventy-eight percent of the annual precipitation falls from April through September, with May and June accounting for about 38 percent of the annual total. This distribution of precipitation helps to make the climate quite favorable for the growing of small grains. Winter precipitation nearly always falls as snow, but as a rule, although snow seldom accumulates to any great depth, it usually is formed into drifts in the open, unprotected areas. Blizzards during the winter months occur occasionally, but usually are of short duration. However, it is wise for travelers and stockmen to be on the alert for this danger during the winter months. Glasgow itself is well protected from most strong winds and blizzard conditions by hills to the north of the city, but occasionally the unprotected surrounding areas feel the full brunt of these winter storms.

Glasgow has a wide range of temperature. Winters are quite cold, but mild winter weather occasionally does occur, sometimes caused when the chinook or foehn wind, which descends the eastern slopes of the Rocky Mountains, reaches as far east as Glasgow. Very cold spells also occur, at least once each winter, but as a rule, these last only a few days. Summers are characterized by warm, sunny weather which can last for several weeks at a time. Sunny weather predominates during the warmer season, but interruptions in the form of clouds and showers do occur, usually in the afternoons and evenings. A few days of hot weather in July and August occur at times, but hot days are seldom oppressive because they are usually accompanied by low humidity.

As is usually the case with a continental climate in northern latitudes, the transitional fall and spring seasons at Glasgow are quite rapid.

# Station Location

GLASGOW

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	Latitude		Longitude		ELEVATION ABOVE								REMARKS
				NORTH	WEST	SEA LEVEL	GROUND							AUTOMATIC OBSERVING EQUIPMENT *		
							GROUND TEMPERATURE SITE	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET RAIN GAUGE	WEIGHING RAIN GAUGE		8 INCH RAIN GAUGE	
*NOTE:																
AIRPORT																
Utility Building Municipal Airport+	10/25/55	5/5/69	1 mile NE	48° 13'	106° 37'	2277 e2284	30 c20	5	5				a3 b5	3 b5	d6	a. Installed 5/25/57. b. Moved 75' NNW 6/9/59. c. Effective 8/6/62. d. Commissioned 1650' NNE of thermometer site 5/12/64. e. Effective 5/12/64.
+International Airport (effective 6/1966)																
Administration Building International Airport 101 Airport Road	5/5/69	4/1/94	385' SSW	48° 13'	106° 37'	2284	f20	5	5			5	5	f6		f. Not moved 5/5/69.
International Airport	04/01/94	Present	NA	48° 13'	106° 37'	g2268									s	ASOS Commissioned 04/01/94. g. Ground elevation.

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\* NOTES: For earlier station history see previous editions.