

1997

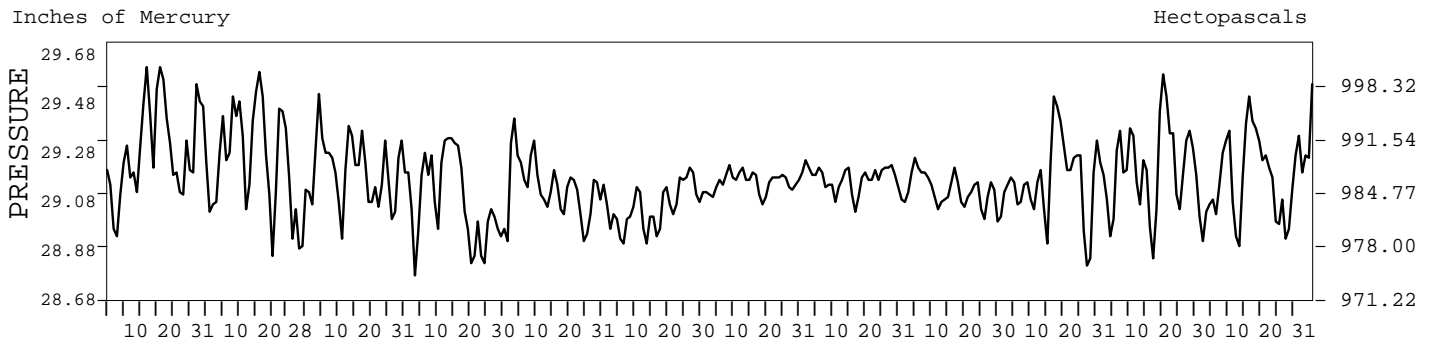
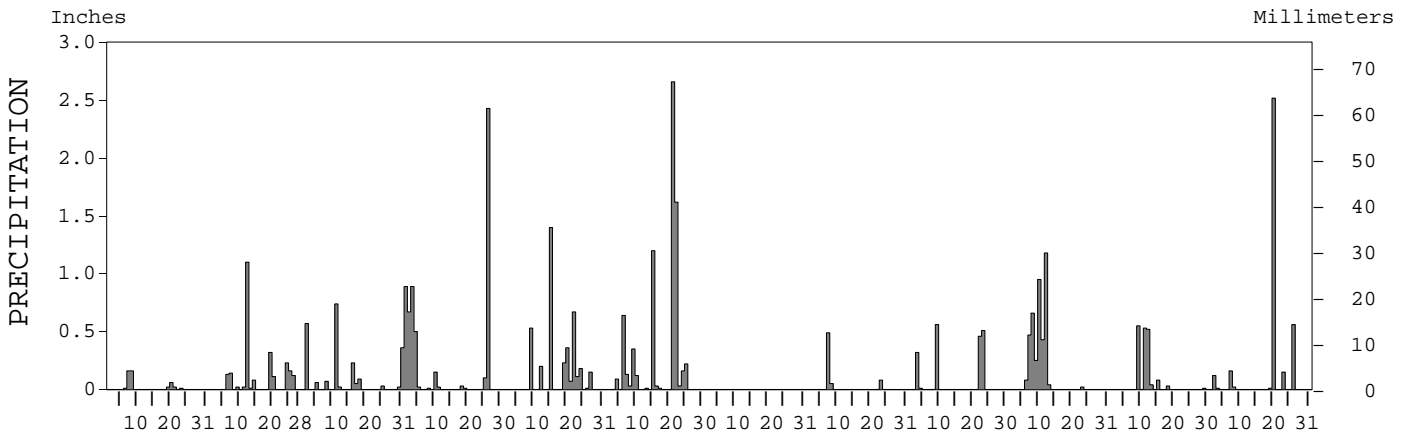
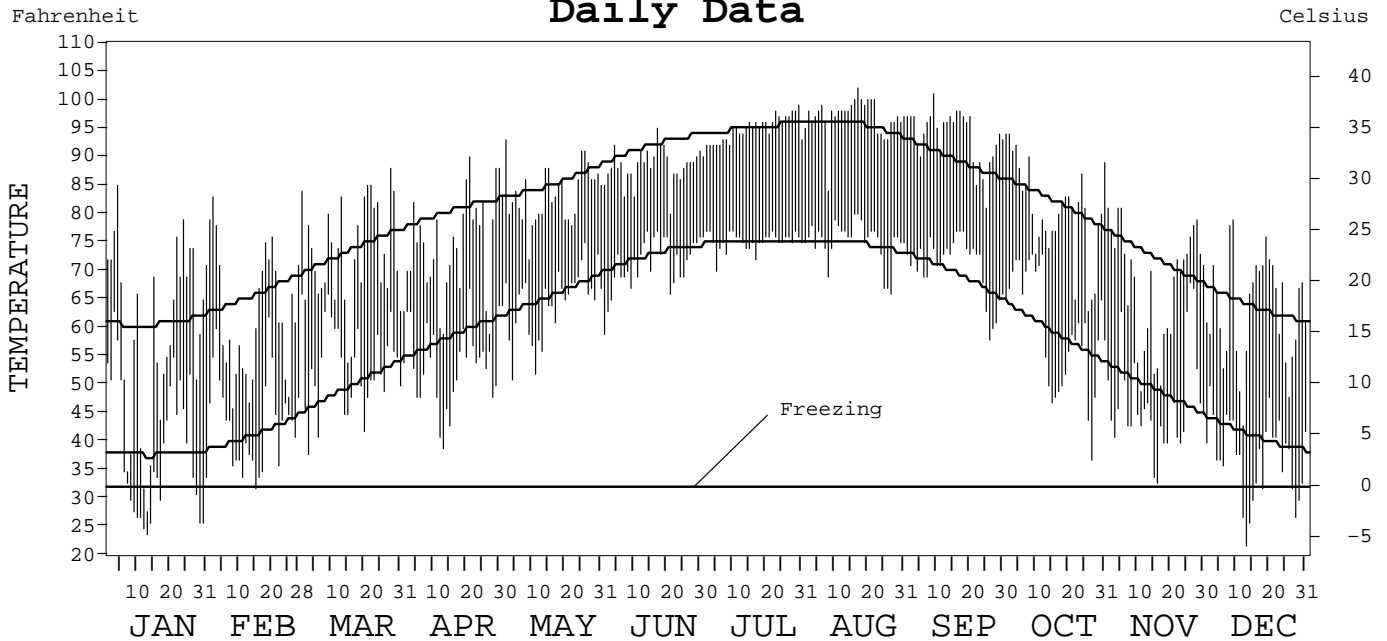
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-5191

SAN ANTONIO,
TEXAS (SAT)

Daily Data



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NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

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METEOROLOGICAL DATA FOR 1997

SAN ANTONIO, TX (SAT)

LATITUDE: 29° 31' 58" N LONGITUDE: 98° 27' 49" W ELEVATION (FT): GRND: 809 BARO: 809 TIME ZONE: CENTRAL (UTC+ 6) WBAN: 12921

| | ELEMENT | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR | |
|----------------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-----------|-----|
| TEMPERATURE °F | MEAN DAILY MAXIMUM | 59.4 | 62.4 | 73.2 | 74.3 | 83.4 | 88.4 | 94.8 | 97.0 | 93.5 | 80.5 | 67.6 | 63.1 | 78.1 | |
| | HIGHEST DAILY MAXIMUM | 85 | 83 | 88 | 90 | 93 | 95 | 99 | 102 | 101 | 94 | 81 | 79 | 102 | |
| | DATE OF OCCURRENCE | 04 | 02 | 28 | 21 | 02 | 17 | 30 | 17 | 09 | 02+ | 05+ | 09 | AUG 17 | |
| | MEAN DAILY MINIMUM | 38.9 | 43.8 | 53.3 | 53.5 | 64.5 | 71.1 | 75.3 | 75.2 | 70.8 | 59.8 | 47.1 | 37.3 | 57.5 | |
| | LOWEST DAILY MINIMUM | 24 | 32 | 38 | 39 | 51 | 59 | 70 | 66 | 58 | 37 | 33 | 22 | 22 | |
| | DATE OF OCCURRENCE | 13 | 15 | 03 | 13 | 04 | 01 | 05 | 27 | 26 | 27 | 16 | 13 | DEC 13 | |
| | AVERAGE DRY BULB | 49.2 | 53.1 | 63.3 | 63.9 | 74.0 | 79.8 | 85.1 | 86.1 | 82.2 | 70.2 | 57.4 | 50.2 | 67.9 | |
| | MEAN WET BULB | 43.8 | 48.2 | 57.5 | 58.1 | 67.2 | 73.3 | 75.0 | 74.3 | 71.9 | 63.2 | 51.9 | 44.0 | 60.7 | |
| | MEAN DEW POINT | 36.4 | 42.9 | 52.7 | 53.4 | 63.6 | 70.4 | 71.0 | 69.5 | 67.2 | 58.3 | 46.7 | 36.3 | 55.7 | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| | MAXIMUM ≥ 90° | 0 | 0 | 0 | 1 | 3 | 10 | 31 | 30 | 24 | 5 | 0 | 0 | 0 | 104 |
| | MAXIMUM ≤ 32° | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| MINIMUM ≤ 32° | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 20 | | |
| MINIMUM ≤ 0° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| H/C | HEATING DEGREE DAYS | 498 | 338 | 108 | 84 | 0 | 0 | 0 | 0 | 44 | 251 | 449 | 1772 | | |
| | COOLING DEGREE DAYS | 12 | 11 | 61 | 60 | 286 | 449 | 628 | 660 | 522 | 212 | 27 | 0 | 2928 | |
| RH | MEAN (PERCENT) | 67 | 72 | 72 | 71 | 74 | 77 | 67 | 64 | 67 | 71 | 72 | 64 | 70 | |
| | HOUR 00 LST | 73 | 82 | 78 | 80 | 82 | 87 | 78 | 75 | 77 | 83 | 82 | 72 | 79 | |
| | HOUR 06 LST | 76 | 85 | 85 | 87 | 87 | 92 | 90 | 90 | 88 | 87 | 84 | 79 | 86 | |
| | HOUR 12 LST | 58 | 63 | 65 | 61 | 65 | 64 | 54 | 48 | 52 | 57 | 60 | 51 | 58 | |
| | HOUR 18 LST | 57 | 60 | 59 | 59 | 61 | 64 | 47 | 41 | 49 | 57 | 63 | 51 | 56 | |
| S | PERCENT POSSIBLE SUNSHINE | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| W/O | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| | HEAVY FOG (VISBY ≤ 1/4 MI) | 7 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 20 | | |
| W/O | THUNDERSTORMS | 0 | 3 | 1 | 5 | 7 | 10 | 2 | 2 | 2 | 0 | 2 | 36 | | |
| | | | | | | | | | | | | | | | |
| CLOUDINESS | SUNRISE-SUNSET: (OKTAS) | | | | | | | | | | | | | | |
| | CEILOMETER (≤ 12,000 FT.) | | | | | | | | | | | | | | |
| | SATELLITE (> 12,000 FT.) | | | | | | | | | | | | | | |
| | MIDNIGHT-MIDNIGHT: (OKTAS) | | | | | | | | | | | | | | |
| | CEILOMETER (≤ 12,000 FT.) | | | | | | | | | | | | | | |
| PR | MEAN STATION PRESS. (IN.) | 29.29 | 29.26 | 29.20 | 29.09 | 29.13 | 29.06 | 29.16 | 29.16 | 29.13 | 29.16 | 29.21 | 29.20 | 29.17 | |
| | MEAN SEA-LEVEL PRESS. (IN.) | 30.12 | 30.08 | 30.01 | 29.90 | 29.94 | 29.85 | 29.96 | 29.96 | 29.92 | 29.97 | 30.03 | 30.03 | 29.98 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| WINDS | RESULTANT SPEED (MPH) | 2.8 | 3.9 | 2.9 | 1.9 | 1.1 | 2.6 | 1.6 | 2.6 | 1.3 | 0.9 | 1.4 | 2.6 | 1.5 | |
| | RES. DIR. (TENS OF DEGS.) | 36 | 04 | 04 | 07 | 10 | 15 | 01 | 03 | 12 | 14 | 04 | 36 | 05 | |
| | MEAN SPEED (MPH) | 7.9 | 8.7 | 8.2 | 9.2 | 8.7 | 8.0 | 8.6 | 8.6 | 7.0 | 7.6 | 7.4 | 7.5 | 8.1 | |
| | PREVAIL. DIR. (TENS OF DEGS.) | 01 | 02 | 01 | 11 | 14 | 14 | 16 | 16 | 14 | 13 | 02 | 31 | 16 | |
| | MAXIMUM 2-MINUTE WIND: | | | | | | | | | | | | | | |
| | SPEED (MPH) | 30 | 32 | 30 | 38 | 46 | 30 | 39 | 29 | 40 | 28 | 26 | 32 | 46 | |
| | DIR. (TENS OF DEGS.) | 01 | 21 | 13 | 31 | 28 | 14 | 06 | 30 | 08 | 16 | 36 | 26 | 28 | |
| | DATE OF OCCURRENCE | 27 | 20 | 25 | 04 | 27 | 25+ | 30 | 07 | 09 | 12 | 01 | 20 | MAY 27 | |
| | MAXIMUM 5-SECOND WIND: | | | | | | | | | | | | | | |
| | SPEED (MPH) | 38 | 38 | 39 | 51 | 55 | 37 | 46 | 31 | 53 | 33 | 37 | 38 | 55 | |
| DIR. (TENS OF DEGS.) | 02 | 21 | 36 | 29 | 29 | 19 | 06 | 30 | 08 | 31 | 02 | 25 | 29 | | |
| DATE OF OCCURRENCE | 27 | 20 | 14 | 04 | 27 | 21 | 30 | 07 | 09 | 13 | 01 | 20 | MAY 27 | | |
| PRECIPITATION | WATER EQUIVALENT: | | | | | | | | | | | | | | |
| | TOTAL (IN.) | 0.44 | 2.44 | 2.24 | 5.72 | 3.91 | 7.30 | T | 0.62 | 1.86 | 4.08 | 1.76 | 3.55 | 33.92 | |
| | GREATEST 24-HOUR (IN.) | 0.24 | 1.12 | 0.76 | 2.43 | 1.40 | 3.37 | T | 0.54 | 0.56 | 1.18 | 0.84 | 2.52 | 3.37 | |
| | DATE OF OCCURRENCE | 07-08 | 11-12 | 11-12 | 26 | 15-16 | 21-22 | 31+ | 07-08 | 09 | 12 | 11-12 | 20 | JUN 21-22 | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| PRECIPITATION ≥ 0.01 | 7 | 12 | 11 | 12 | 11 | 15 | 0 | 3 | 5 | 9 | 7 | 8 | 100 | | |
| PRECIPITATION ≥ 0.10 | 2 | 8 | 4 | 7 | 9 | 9 | 0 | 1 | 4 | 6 | 3 | 5 | 58 | | |
| PRECIPITATION ≥ 1.00 | 0 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 8 | | |
| SNOWFALL | SNOW, ICE PELLETS, HAIL: | | | | | | | | | | | | | | |
| | TOTAL (IN.) | | | | | | | | | | | | | | |
| | GREATEST 24-HOUR (IN.) | | | | | | | | | | | | | | |
| | DATE OF OCCURRENCE | | | | | | | | | | | | | | |
| | NUMBER OF DAYS WITH: | | | | | | | | | | | | | | |
| SNOWFALL ≥ 1.0 | | | | | | | | | | | | | | | |

NORMALS, MEANS, AND EXTREMES

SAN ANTONIO, TX (SAT)

LATITUDE: 29° 31' 58" N LONGITUDE: 98° 27' 49" W ELEVATION (FT): GRND: 809 BARO: 809 TIME ZONE: CENTRAL (UTC+ 6) WBAN: 12921

| ELEMENT | | POR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR |
|-----------------------|----------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|
| TEMPERATURE °F | NORMAL DAILY MAXIMUM | 30 | 60.8 | 65.7 | 73.5 | 80.3 | 85.3 | 91.8 | 95.0 | 95.3 | 89.3 | 81.7 | 71.9 | 63.5 | 79.5 |
| | MEAN DAILY MAXIMUM | 50 | 61.7 | 66.2 | 73.5 | 80.4 | 85.9 | 91.8 | 95.0 | 95.2 | 89.9 | 82.0 | 71.2 | 64.4 | 79.8 |
| | HIGHEST DAILY MAXIMUM | 56 | 89 | 100 | 100 | 101 | 103 | 105 | 106 | 108 | 103 | 99 | 94 | 90 | 108 |
| | YEAR OF OCCURRENCE | | 1971 | 1996 | 1991 | 1996 | 1989 | 1980 | 1989 | 1986 | 1985 | 1991 | 1988 | 1955 | AUG 1986 |
| | MEAN OF EXTREME MAXS. | 50 | 79.7 | 83.4 | 88.3 | 91.7 | 94.3 | 97.9 | 100.0 | 100.2 | 97.4 | 92.0 | 85.4 | 80.3 | 90.9 |
| | NORMAL DAILY MINIMUM | 30 | 37.9 | 41.3 | 49.7 | 58.4 | 65.7 | 72.6 | 75.0 | 74.5 | 69.2 | 58.8 | 48.8 | 40.8 | 57.7 |
| | MEAN DAILY MINIMUM | 50 | 39.2 | 43.0 | 50.0 | 58.2 | 66.0 | 72.0 | 74.4 | 73.8 | 69.1 | 59.2 | 48.5 | 41.7 | 57.9 |
| | LOWEST DAILY MINIMUM | 56 | 0 | 6 | 19 | 31 | 43 | 53 | 62 | 61 | 41 | 27 | 21 | 6 | 0 |
| | YEAR OF OCCURRENCE | | 1949 | 1951 | 1980 | 1987 | 1984 | 1964 | 1967 | 1992 | 1942 | 1993 | 1976 | 1989 | JAN 1949 |
| | MEAN OF EXTREME MINS. | 50 | 22.0 | 26.0 | 31.1 | 40.7 | 51.9 | 62.2 | 68.7 | 67.4 | 55.5 | 42.1 | 30.5 | 24.4 | 43.5 |
| | NORMAL DRY BULB | 30 | 49.3 | 53.5 | 61.7 | 69.3 | 75.5 | 82.2 | 85.0 | 84.9 | 79.3 | 70.2 | 60.4 | 52.2 | 68.6 |
| | MEAN DRY BULB | 50 | 50.5 | 54.7 | 61.7 | 69.3 | 76.0 | 81.9 | 84.7 | 84.5 | 79.6 | 70.6 | 59.8 | 53.0 | 68.9 |
| | MEAN WET BULB | 14 | 45.1 | 49.0 | 54.5 | 60.8 | 68.5 | 72.9 | 73.8 | 73.7 | 70.0 | 62.9 | 50.2 | 48.1 | 60.8 |
| | MEAN DEW POINT | 14 | 38.2 | 42.1 | 47.5 | 54.4 | 64.2 | 68.9 | 69.0 | 68.8 | 65.0 | 57.5 | 44.8 | 42.0 | 55.2 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| MAXIMUM ≥ 90° | 30 | 0.0 | 0.2 | 0.8 | 2.1 | 7.7 | 20.7 | 27.4 | 28.0 | 16.8 | 4.1 | 0.1 | 0.0 | 107.9 | |
| MAXIMUM ≤ 32° | 30 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.6 | |
| MINIMUM ≤ 32° | 30 | 9.5 | 5.7 | 1.7 | * | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 6.6 | 25.3 | |
| MINIMUM ≤ 0° | 30 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| H/C | NORMAL HEATING DEG. DAYS | 30 | 494 | 332 | 167 | 32 | 0 | 0 | 0 | 0 | 0 | 30 | 180 | 409 | 1644 |
| | NORMAL COOLING DEG. DAYS | 30 | 8 | 10 | 64 | 161 | 326 | 516 | 620 | 617 | 429 | 191 | 42 | 12 | 2996 |
| RH | NORMAL (PERCENT) | 30 | 67 | 65 | 63 | 66 | 70 | 69 | 65 | 65 | 68 | 67 | 68 | 68 | 67 |
| | HOUR 00 LST | 30 | 74 | 74 | 72 | 75 | 80 | 79 | 74 | 74 | 78 | 77 | 78 | 76 | 76 |
| | HOUR 06 LST | 30 | 79 | 80 | 79 | 82 | 87 | 87 | 87 | 86 | 86 | 84 | 82 | 80 | 83 |
| | HOUR 12 LST | 30 | 58 | 56 | 54 | 57 | 60 | 58 | 53 | 52 | 56 | 55 | 56 | 57 | 56 |
| | HOUR 18 LST | 30 | 55 | 50 | 47 | 50 | 55 | 52 | 46 | 46 | 52 | 52 | 56 | 56 | 51 |
| S | PERCENT POSSIBLE SUNSHINE | 53 | 47 | 50 | 57 | 56 | 56 | 67 | 74 | 74 | 67 | 64 | 54 | 48 | 60 |
| W/O | MEAN NO. DAYS WITH: | | | | | | | | | | | | | | |
| | HEAVY FOG(VISBY≤1/4 MI) | 56 | 5.0 | 2.9 | 2.4 | 1.3 | 0.8 | 0.1 | 0.1 | 0.1 | 0.2 | 1.4 | 2.9 | 4.4 | 21.6 |
| | THUNDERSTORMS | 56 | 1.0 | 1.5 | 2.7 | 4.1 | 6.7 | 4.8 | 3.5 | 4.2 | 4.2 | 2.7 | 1.7 | 0.9 | 38.0 |
| CLOUDINESS | MEAN: | | | | | | | | | | | | | | |
| | SUNRISE-SUNSET (OKTAS) | 1 | | | | | 5.0 | 3.0 | | | | | | | |
| | MIDNIGHT-MIDNIGHT (OKTAS) | | | | | | | | | | | | | | |
| | MEAN NO. DAYS WITH: | | | | | | | | | | | | | | |
| CLEAR | 1 | 4.0 | 5.0 | 8.0 | | 6.0 | 12.0 | | | | | | | | |
| PARTLY CLOUDY | 1 | 1.0 | 4.0 | 2.0 | | 11.0 | 5.0 | | | | | | | | |
| CLOUDY | 1 | 1.0 | | 6.0 | | 3.0 | 2.0 | | | | | | | | |
| PR | MEAN STATION PRESSURE (IN) | 25 | 29.29 | 29.25 | 29.14 | 29.11 | 29.07 | 29.11 | 29.16 | 29.15 | 29.16 | 29.20 | 29.23 | 29.27 | 29.18 |
| | MEAN SEA-LEVEL PRES. (IN) | 14 | 30.13 | 30.07 | 30.00 | 29.92 | 29.89 | 29.91 | 29.97 | 29.96 | 29.97 | 30.02 | 30.07 | 30.11 | 30.00 |
| WINDS | MEAN SPEED (MPH) | 35 | 8.5 | 9.0 | 9.6 | 9.7 | 9.6 | 9.5 | 9.1 | 8.2 | 8.0 | 8.2 | 8.4 | 8.1 | 8.8 |
| | PREVAIL.DIR.(TENS OF DEGS) | 20 | 36 | 36 | 14 | 14 | 14 | 14 | 16 | 16 | 14 | 16 | 36 | 36 | 16 |
| | MAXIMUM 2-MINUTE: | | | | | | | | | | | | | | |
| | SPEED (MPH) | 55 | 30 | 32 | 36 | 38 | 46 | 30 | 39 | 36 | 43 | 29 | 26 | 32 | 46 |
| | DIR. (TENS OF DEGS) | | 33 | 21 | 01 | 31 | 28 | 14 | 30 | 15 | 25 | 35 | 17 | 26 | 28 |
| | YEAR OF OCCURRENCE | | 1996 | 1997 | 1996 | 1997 | 1997 | 1997 | 1996 | 1996 | 1996 | 1996 | 1996 | 1997 | MAY 1997 |
| | MAXIMUM 5-SECOND: | | | | | | | | | | | | | | |
| SPEED (MPH) | 55 | 38 | 38 | 46 | 51 | 55 | 37 | 54 | 41 | 71 | 36 | 37 | 40 | 71 | |
| DIR. (TENS OF DEGS) | | 34 | 01 | 01 | 29 | 29 | 19 | 29 | 15 | 26 | 35 | 02 | 36 | 26 | |
| YEAR OF OCCURRENCE | | 1996 | 1996 | 1996 | 1997 | 1997 | 1997 | 1996 | 1996 | 1996 | 1996 | 1997 | 1996 | SEP 1996 | |
| PRECIPITATION | NORMAL (IN) | 30 | 1.71 | 1.81 | 1.52 | 2.50 | 4.22 | 3.81 | 2.16 | 2.54 | 3.41 | 3.17 | 2.62 | 1.51 | 30.98 |
| | MAXIMUM MONTHLY (IN) | 55 | 8.52 | 6.43 | 6.12 | 9.32 | 12.85 | 11.95 | 8.29 | 11.14 | 15.78 | 9.75 | 6.01 | 13.96 | 15.78 |
| | YEAR OF OCCURRENCE | | 1968 | 1965 | 1992 | 1957 | 1987 | 1986 | 1990 | 1974 | 1946 | 1994 | 1977 | 1991 | SEP 1946 |
| | MINIMUM MONTHLY (IN) | 55 | T | 0.03 | 0.03 | 0.11 | 0.17 | 0.01 | T | 0.00 | 0.06 | T | T | 0.03 | 0.00 |
| | YEAR OF OCCURRENCE | | 1996 | 1954 | 1961 | 1984 | 1961 | 1967 | 1993 | 1952 | 1947 | 1952 | 1966 | 1950 | AUG 1952 |
| | MAXIMUM IN 24 HOURS (IN) | 55 | 3.18 | 2.44 | 3.59 | 4.88 | 6.53 | 6.30 | 6.97 | 5.57 | 7.28 | 5.29 | 4.87 | 6.90 | 7.28 |
| | YEAR OF OCCURRENCE | | 1968 | 1986 | 1992 | 1977 | 1972 | 1986 | 1958 | 1950 | 1973 | 1942 | 1977 | 1991 | SEP 1973 |
| | NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | |
| PRECIPITATION ≥ 0.01 | 30 | 7.7 | 7.0 | 7.1 | 7.3 | 8.9 | 6.4 | 4.8 | 5.1 | 7.2 | 6.8 | 6.6 | 7.1 | 82.0 | |
| PRECIPITATION ≥ 1.00 | 30 | 0.4 | 0.4 | 0.4 | 0.8 | 1.2 | 1.2 | 0.7 | 0.8 | 0.8 | 1.1 | 0.7 | 0.3 | 8.8 | |
| SNOWFALL | NORMAL (IN) | 30 | 0.6 | 0.3 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.* | 0.9 |
| | MAXIMUM MONTHLY (IN) | 54 | 15.9 | 3.5 | T | T | T | T | 0.0 | 0.0 | 0.0 | T | 0.3 | 0.2 | 15.9 |
| | YEAR OF OCCURRENCE | | 1985 | 1966 | 1994 | 1993 | 1993 | 1989 | | | | 1993 | 1957 | 1964 | JAN 1985 |
| | MAXIMUM IN 24 HOURS (IN) | 54 | 13.2 | 3.5 | T | T | T | T | 0.0 | 0.0 | 0.0 | T | 0.3 | 0.2 | 13.2 |
| | YEAR OF OCCURRENCE | | 1985 | 1966 | 1994 | 1993 | 1993 | 1989 | | | | 1993 | 1957 | 1964 | JAN 1985 |
| | MAXIMUM SNOW DEPTH (IN) | 48 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | YEAR OF OCCURRENCE | | 1985 | 1966 | | | | | | | | | | | JAN 1985 |
| NORMAL NO. DAYS WITH: | | | | | | | | | | | | | | | |
| SNOWFALL ≥ 1.0 | 30 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | |

PRECIPITATION (inches) 1997 SAN ANTONIO, TX (SAT)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|-----------------|------|------|------|------|-------|-------|------|-------|-------|------|------|-------|--------|
| 1968 | 8.52 | 1.85 | 1.27 | 1.92 | 2.82 | 2.63 | 1.53 | 0.94 | 2.99 | 0.69 | 4.58 | 0.66 | 30.40 |
| 1969 | 1.76 | 2.90 | 2.35 | 2.46 | 4.61 | 2.32 | 0.36 | 4.19 | 1.32 | 5.85 | 1.02 | 2.28 | 31.42 |
| 1970 | 1.10 | 2.66 | 1.98 | 1.13 | 7.30 | 0.89 | 0.91 | 0.95 | 4.35 | 1.31 | 0.01 | 0.15 | 22.74 |
| 1971 | 0.04 | 0.81 | 0.04 | 1.39 | 1.52 | 2.74 | 1.05 | 9.42 | 4.57 | 4.62 | 2.74 | 2.86 | 31.80 |
| 1972 | 1.35 | 0.40 | 0.13 | 1.94 | 11.24 | 2.86 | 3.13 | 4.24 | 1.40 | 1.99 | 2.37 | 0.44 | 31.49 |
| 1973 | 2.77 | 2.76 | 1.58 | 5.41 | 2.73 | 10.44 | 6.91 | 1.29 | 13.09 | 4.85 | 0.29 | 0.16 | 52.28 |
| 1974 | 1.36 | 0.04 | 0.94 | 2.18 | 4.28 | 1.02 | 1.28 | 11.14 | 3.85 | 4.09 | 5.39 | 1.43 | 37.00 |
| 1975 | 1.04 | 3.30 | 0.52 | 2.69 | 6.91 | 4.60 | 1.06 | 1.28 | 0.51 | 2.25 | 0.03 | 1.48 | 25.67 |
| 1976 | 0.56 | 0.13 | 1.20 | 5.67 | 5.80 | 1.61 | 5.39 | 2.09 | 3.79 | 8.48 | 2.46 | 1.95 | 39.13 |
| 1977 | 3.10 | 0.91 | 0.88 | 8.80 | 1.62 | 2.26 | 0.10 | 0.06 | 2.11 | 3.47 | 6.01 | 0.32 | 29.64 |
| 1978 | 0.68 | 1.76 | 1.71 | 3.62 | 2.45 | 3.96 | 1.43 | 4.97 | 8.86 | 0.55 | 4.91 | 1.09 | 35.99 |
| 1979 | 4.07 | 1.38 | 3.55 | 5.34 | 1.98 | 5.59 | 7.38 | 2.09 | 0.86 | 0.11 | 1.43 | 2.86 | 36.64 |
| 1980 | 0.72 | 0.74 | 0.98 | 1.67 | 6.42 | 0.52 | 0.26 | 2.64 | 5.05 | 1.09 | 3.53 | 0.61 | 24.23 |
| 1981 | 2.06 | 0.96 | 1.96 | 2.21 | 6.43 | 8.71 | 0.25 | 2.41 | 1.36 | 8.61 | 0.72 | 0.69 | 36.37 |
| 1982 | 0.72 | 1.28 | 0.69 | 1.23 | 6.42 | 1.37 | 0.14 | 0.55 | 0.87 | 2.84 | 4.54 | 2.31 | 22.96 |
| 1983 | 1.48 | 1.54 | 3.89 | 0.18 | 4.37 | 1.27 | 2.43 | 2.00 | 3.86 | 1.64 | 3.06 | 0.39 | 26.11 |
| 1984 | 1.87 | 0.54 | 1.91 | 0.11 | 3.76 | 1.40 | T | 3.04 | 1.06 | 5.94 | 2.91 | 3.41 | 25.95 |
| 1985 | 2.68 | 1.91 | 2.85 | 3.27 | 2.47 | 8.20 | 5.80 | 0.45 | 4.80 | 3.91 | 5.00 | 0.09 | 41.43 |
| 1986 | 0.76 | 2.52 | 0.35 | 0.60 | 6.29 | 11.95 | 0.05 | 1.86 | 2.83 | 6.58 | 1.83 | 7.11 | 42.73 |
| 1987 | 1.13 | 4.78 | 1.10 | 1.48 | 12.85 | 7.69 | 1.21 | 0.33 | 2.24 | 0.44 | 2.53 | 2.18 | 37.96 |
| 1988 | 0.39 | 0.92 | 0.86 | 1.23 | 0.41 | 5.50 | 5.58 | 1.98 | 0.83 | 0.62 | 0.02 | 0.67 | 19.01 |
| 1989 | 2.96 | 0.29 | 1.24 | 2.55 | 0.33 | 3.96 | 0.69 | 0.48 | 1.54 | 5.81 | 1.93 | 0.36 | 22.14 |
| 1990 | 1.17 | 2.68 | 5.17 | 4.52 | 3.28 | 1.18 | 8.29 | 1.30 | 3.70 | 3.71 | 3.11 | 0.20 | 38.31 |
| 1991 | 5.08 | 2.34 | 1.06 | 4.91 | 5.30 | 2.28 | 2.23 | 2.84 | 1.42 | 0.87 | 0.47 | 13.96 | 42.76 |
| 1992 | 5.64 | 6.37 | 6.12 | 3.03 | 8.15 | 5.67 | 1.28 | 2.56 | 1.12 | 0.92 | 3.47 | 2.16 | 46.49 |
| 1993 | 1.31 | 3.72 | 1.56 | 1.81 | 12.47 | 6.43 | T | 0.01 | 0.52 | 3.07 | 0.66 | 0.44 | 32.00 |
| 1994 | 1.55 | 0.64 | 5.06 | 2.21 | 7.01 | 1.66 | 0.50 | 2.54 | 5.52 | 9.75 | 0.71 | 3.28 | 40.43 |
| 1995 | 0.28 | 1.19 | 1.58 | 1.07 | 5.36 | 4.81 | 0.71 | 2.03 | 4.49 | 0.23 | 0.82 | 0.09 | 22.66 |
| 1996 | T | 0.70 | 0.30 | 0.89 | 1.26 | 2.12 | 1.31 | 2.86 | 3.66 | 0.36 | 2.79 | 1.56 | 17.81 |
| 1997 | 0.44 | 2.44 | 2.24 | 5.72 | 3.91 | 7.30 | T | 0.62 | 1.86 | 4.08 | 1.76 | 3.55 | 33.92 |
| POR= 113 YRS | 1.62 | 1.73 | 0.55 | 1.43 | 3.54 | 2.46 | 1.65 | 0.80 | 2.31 | 1.14 | 0.36 | 0.09 | 17.68 |

WBAN : 12921

AVERAGE TEMPERATURE (°F) 1997 SAN ANTONIO, TX (SAT)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1968 | 49.8 | 48.3 | 58.0 | 68.1 | 75.3 | 80.5 | 82.7 | 84.2 | 76.0 | 72.2 | 56.4 | 50.7 | 66.9 |
| 1969 | 52.5 | 53.6 | 54.9 | 69.0 | 73.5 | 81.2 | 86.8 | 85.7 | 79.6 | 69.8 | 58.1 | 55.1 | 68.3 |
| 1970 | 45.6 | 54.8 | 56.8 | 70.2 | 72.9 | 80.7 | 84.0 | 85.7 | 81.1 | 67.7 | 58.0 | 60.1 | 68.1 |
| 1971 | 56.0 | 57.4 | 64.6 | 69.4 | 78.1 | 83.6 | 85.9 | 81.2 | 80.1 | 73.9 | 63.2 | 57.2 | 70.9 |
| 1972 | 52.8 | 56.7 | 66.3 | 73.7 | 72.8 | 80.3 | 82.2 | 82.1 | 82.0 | 71.9 | 54.0 | 50.3 | 68.8 |
| 1973 | 47.2 | 51.9 | 66.1 | 66.0 | 74.7 | 79.2 | 83.2 | 82.1 | 79.3 | 72.5 | 65.8 | 52.2 | 68.4 |
| 1974 | 51.0 | 56.5 | 67.9 | 69.7 | 77.3 | 79.4 | 83.0 | 81.2 | 72.3 | 68.2 | 57.3 | 50.9 | 67.9 |
| 1975 | 53.2 | 53.5 | 61.4 | 68.4 | 73.5 | 80.0 | 80.9 | 81.7 | 76.0 | 71.1 | 60.3 | 53.1 | 67.8 |
| 1976 | 49.6 | 61.2 | 63.8 | 68.9 | 71.3 | 79.8 | 79.8 | 81.6 | 77.5 | 61.1 | 52.1 | 49.9 | 66.4 |
| 1977 | 44.1 | 52.8 | 61.8 | 66.9 | 74.8 | 81.5 | 84.9 | 84.7 | 82.3 | 71.2 | 61.4 | 53.4 | 68.3 |
| 1978 | 43.4 | 46.4 | 59.6 | 68.9 | 77.1 | 82.7 | 86.1 | 83.1 | 78.5 | 69.3 | 62.4 | 51.7 | 67.4 |
| 1979 | 43.7 | 52.4 | 63.3 | 69.7 | 73.9 | 80.9 | 84.7 | 83.1 | 78.7 | 74.7 | 58.2 | 55.4 | 68.2 |
| 1980 | 52.6 | 53.7 | 61.5 | 67.6 | 76.1 | 85.1 | 88.1 | 85.3 | 83.7 | 70.7 | 58.3 | 55.0 | 69.8 |
| 1981 | 50.8 | 53.7 | 60.7 | 72.9 | 75.3 | 81.5 | 84.2 | 84.7 | 78.9 | 71.9 | 62.4 | 53.0 | 69.2 |
| 1982 | 50.8 | 49.7 | 63.1 | 66.9 | 74.5 | 81.6 | 85.5 | 86.0 | 80.1 | 69.3 | 59.4 | 52.4 | 68.3 |
| 1983 | 48.9 | 52.1 | 58.7 | 65.2 | 73.6 | 79.2 | 82.9 | 84.5 | 78.5 | 70.9 | 62.5 | 43.0 | 66.7 |
| 1984 | 46.7 | 54.1 | 64.2 | 69.7 | 77.1 | 82.8 | 85.0 | 84.7 | 77.6 | 71.2 | 58.8 | 59.6 | 69.3 |
| 1985 | 44.2 | 50.5 | 64.1 | 69.4 | 76.7 | 80.2 | 82.2 | 85.5 | 79.4 | 71.7 | 64.4 | 49.9 | 68.2 |
| 1986 | 53.4 | 58.0 | 62.9 | 72.6 | 74.6 | 81.5 | 85.8 | 85.7 | 83.7 | 69.7 | 59.4 | 51.6 | 69.9 |
| 1987 | 50.7 | 55.9 | 57.8 | 66.1 | 75.8 | 80.5 | 83.8 | 86.0 | 79.2 | 71.2 | 60.6 | 54.2 | 68.5 |
| 1988 | 47.6 | 54.3 | 61.3 | 69.1 | 76.1 | 81.2 | 84.6 | 86.4 | 80.7 | 73.2 | 65.1 | 56.0 | 69.6 |
| 1989 | 56.2 | 51.6 | 61.9 | 70.4 | 81.7 | 83.3 | 86.6 | 86.0 | 79.1 | 71.3 | 61.8 | 43.4 | 69.4 |
| 1990 | 56.4 | 58.9 | 61.5 | 69.7 | 79.3 | 87.5 | 83.4 | 85.3 | 80.0 | 69.3 | 63.0 | 51.9 | 70.5 |
| 1991 | 48.9 | 56.6 | 64.0 | 72.4 | 77.7 | 82.8 | 84.5 | 85.8 | 77.8 | 73.3 | 57.4 | 55.5 | 69.7 |
| 1992 | 50.8 | 59.1 | 63.3 | 69.0 | 73.7 | 82.5 | 84.7 | 82.2 | 81.7 | 73.4 | 57.3 | 56.3 | 69.5 |
| 1993 | 51.2 | 55.5 | 61.5 | 67.3 | 73.9 | 81.6 | 86.1 | 87.3 | 81.5 | 70.7 | 56.3 | 55.1 | 69.0 |
| 1994 | 52.3 | 56.2 | 63.9 | 69.8 | 76.0 | 84.5 | 87.9 | 86.1 | 78.4 | 72.7 | 64.8 | 57.0 | 70.8 |
| 1995 | 53.5 | 57.4 | 61.9 | 69.8 | 78.6 | 79.3 | 84.3 | 85.5 | 80.1 | 69.8 | 59.5 | 55.6 | 69.6 |
| 1996 | 51.0 | 57.9 | 57.6 | 69.5 | 81.9 | 84.1 | 87.3 | 84.4 | 78.4 | 71.1 | 61.3 | 54.5 | 69.9 |
| 1997 | 49.2 | 53.1 | 63.3 | 63.9 | 74.0 | 79.8 | 85.1 | 86.1 | 82.2 | 70.2 | 57.4 | 50.2 | 67.9 |
| POR= 113 YRS | 51.6 | 55.2 | 62.1 | 69.3 | 75.5 | 81.6 | 84.0 | 84.2 | 79.4 | 70.9 | 60.4 | 53.6 | 69.0 |

WBAN : 12921

HEATING DEGREE DAYS (base 65°F) 1997 SAN ANTONIO, TX (SAT)

| YEAR | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1968-69 | 0 | 0 | 0 | 9 | 278 | 437 | 394 | 319 | 315 | 5 | 3 | 0 | 1760 |
| 1969-70 | 0 | 0 | 0 | 52 | 253 | 299 | 599 | 282 | 266 | 45 | 7 | 0 | 1803 |
| 1970-71 | 0 | 0 | 1 | 72 | 247 | 201 | 282 | 239 | 134 | 52 | 1 | 0 | 1229 |
| 1971-72 | 0 | 0 | 1 | 0 | 129 | 266 | 382 | 263 | 61 | 7 | 0 | 0 | 1109 |
| 1972-73 | 0 | 0 | 0 | 29 | 334 | 457 | 551 | 362 | 29 | 94 | 1 | 0 | 1857 |
| 1973-74 | 0 | 0 | 0 | 4 | 85 | 391 | 437 | 257 | 74 | 39 | 0 | 0 | 1287 |
| 1974-75 | 0 | 0 | 2 | 19 | 260 | 433 | 389 | 316 | 152 | 41 | 0 | 0 | 1612 |
| 1975-76 | 0 | 0 | 1 | 21 | 214 | 394 | 472 | 166 | 143 | 11 | 2 | 0 | 1424 |
| 1976-77 | 0 | 0 | 0 | 160 | 382 | 461 | 643 | 336 | 144 | 32 | 0 | 0 | 2158 |
| 1977-78 | 0 | 0 | 0 | 19 | 138 | 360 | 667 | 521 | 192 | 27 | 4 | 0 | 1928 |
| 1978-79 | 0 | 0 | 0 | 12 | 152 | 413 | 657 | 356 | 109 | 20 | 4 | 0 | 1723 |
| 1979-80 | 0 | 0 | 0 | 15 | 243 | 306 | 386 | 333 | 163 | 42 | 0 | 0 | 1488 |
| 1980-81 | 0 | 0 | 0 | 62 | 245 | 331 | 437 | 332 | 157 | 10 | 0 | 0 | 1574 |
| 1981-82 | 0 | 0 | 2 | 52 | 112 | 368 | 445 | 430 | 171 | 77 | 2 | 0 | 1659 |
| 1982-83 | 0 | 0 | 0 | 49 | 237 | 404 | 490 | 356 | 208 | 99 | 1 | 0 | 1844 |
| 1983-84 | 0 | 0 | 5 | 20 | 154 | 681 | 563 | 315 | 120 | 21 | 2 | 0 | 1881 |
| 1984-85 | 0 | 0 | 9 | 28 | 228 | 203 | 635 | 406 | 109 | 26 | 0 | 0 | 1644 |
| 1985-86 | 0 | 0 | 10 | 9 | 112 | 467 | 354 | 232 | 106 | 8 | 1 | 0 | 1299 |
| 1986-87 | 0 | 0 | 0 | 14 | 204 | 413 | 443 | 254 | 233 | 98 | 0 | 0 | 1659 |
| 1987-88 | 0 | 0 | 0 | 1 | 194 | 339 | 538 | 323 | 179 | 38 | 0 | 0 | 1612 |
| 1988-89 | 0 | 0 | 0 | 0 | 122 | 291 | 292 | 392 | 187 | 55 | 0 | 0 | 1339 |
| 1989-90 | 0 | 0 | 0 | 42 | 165 | 663 | 283 | 190 | 154 | 32 | 0 | 0 | 1529 |
| 1990-91 | 0 | 0 | 0 | 50 | 142 | 422 | 494 | 240 | 96 | 7 | 0 | 0 | 1451 |
| 1991-92 | 0 | 0 | 5 | 30 | 271 | 306 | 435 | 188 | 91 | 31 | 5 | 0 | 1362 |
| 1992-93 | 0 | 0 | 0 | 0 | 260 | 287 | 421 | 269 | 147 | 42 | 0 | 0 | 1426 |
| 1993-94 | 0 | 0 | 0 | 85 | 287 | 323 | 391 | 273 | 130 | 28 | 10 | 0 | 1527 |
| 1994-95 | 0 | 0 | 0 | 19 | 99 | 267 | 359 | 215 | 180 | 29 | 0 | 0 | 1168 |
| 1995-96 | 0 | 0 | 9 | 12 | 187 | 324 | 435 | 280 | 277 | 63 | 0 | 0 | 1587 |
| 1996-97 | 0 | 0 | 0 | 27 | 165 | 325 | 498 | 338 | 108 | 84 | 0 | 0 | 1545 |
| 1997- | 0 | 0 | 0 | 44 | 251 | 449 | | | | | | | |

WBAN : 12921

COOLING DEGREE DAYS (base 65°F) 1997 SAN ANTONIO, TX (SAT)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| 1969 | 11 | 5 | 8 | 133 | 273 | 494 | 683 | 652 | 448 | 207 | 53 | 2 | 2969 |
| 1970 | 3 | 3 | 20 | 208 | 259 | 478 | 592 | 651 | 493 | 163 | 40 | 57 | 2967 |
| 1971 | 14 | 36 | 130 | 189 | 414 | 564 | 658 | 509 | 459 | 281 | 81 | 31 | 3366 |
| 1972 | 11 | 31 | 105 | 276 | 252 | 465 | 542 | 539 | 515 | 249 | 12 | 6 | 3003 |
| 1973 | 8 | 0 | 69 | 129 | 310 | 431 | 570 | 536 | 437 | 242 | 114 | 0 | 2846 |
| 1974 | 11 | 22 | 171 | 188 | 387 | 439 | 568 | 506 | 229 | 124 | 34 | 5 | 2684 |
| 1975 | 29 | 1 | 51 | 151 | 273 | 457 | 502 | 524 | 337 | 217 | 80 | 30 | 2652 |
| 1976 | 3 | 62 | 113 | 136 | 202 | 451 | 467 | 521 | 383 | 45 | 0 | 0 | 2383 |
| 1977 | 0 | 3 | 52 | 98 | 311 | 502 | 620 | 618 | 525 | 218 | 38 | 5 | 2990 |
| 1978 | 3 | 7 | 30 | 152 | 384 | 537 | 660 | 567 | 410 | 154 | 79 | 11 | 2994 |
| 1979 | 3 | 13 | 65 | 166 | 285 | 482 | 619 | 570 | 418 | 322 | 42 | 13 | 2998 |
| 1980 | 11 | 14 | 61 | 127 | 355 | 614 | 725 | 635 | 567 | 245 | 51 | 26 | 3431 |
| 1981 | 3 | 24 | 30 | 255 | 324 | 502 | 603 | 619 | 424 | 273 | 41 | 3 | 3101 |
| 1982 | 11 | 5 | 117 | 142 | 304 | 504 | 645 | 659 | 459 | 191 | 72 | 19 | 3128 |
| 1983 | 0 | 0 | 21 | 111 | 276 | 435 | 560 | 611 | 417 | 207 | 84 | 8 | 2730 |
| 1984 | 0 | 8 | 101 | 169 | 383 | 541 | 625 | 618 | 394 | 230 | 46 | 44 | 3159 |
| 1985 | 0 | 8 | 85 | 165 | 368 | 462 | 539 | 641 | 450 | 223 | 101 | 5 | 3047 |
| 1986 | 2 | 45 | 49 | 244 | 304 | 500 | 652 | 646 | 568 | 166 | 40 | 4 | 3220 |
| 1987 | 4 | 5 | 17 | 135 | 340 | 471 | 589 | 658 | 434 | 199 | 67 | 12 | 2931 |
| 1988 | 6 | 19 | 71 | 166 | 352 | 492 | 617 | 671 | 480 | 264 | 131 | 20 | 3289 |
| 1989 | 24 | 23 | 99 | 222 | 524 | 557 | 678 | 656 | 429 | 244 | 75 | 0 | 3531 |
| 1990 | 22 | 26 | 53 | 177 | 450 | 681 | 578 | 635 | 459 | 192 | 91 | 23 | 3387 |
| 1991 | 0 | 10 | 70 | 234 | 402 | 541 | 612 | 654 | 396 | 295 | 49 | 20 | 3283 |
| 1992 | 0 | 23 | 47 | 158 | 281 | 531 | 618 | 542 | 508 | 267 | 34 | 24 | 3033 |
| 1993 | 1 | 7 | 45 | 117 | 283 | 503 | 660 | 698 | 503 | 267 | 31 | 22 | 3137 |
| 1994 | 8 | 34 | 102 | 183 | 357 | 593 | 715 | 659 | 410 | 261 | 97 | 27 | 3446 |
| 1995 | 7 | 9 | 90 | 177 | 429 | 436 | 603 | 644 | 467 | 167 | 28 | 40 | 3097 |
| 1996 | 9 | 79 | 57 | 203 | 530 | 578 | 700 | 610 | 411 | 220 | 60 | 8 | 3465 |
| 1997 | 12 | 11 | 61 | 60 | 286 | 449 | 628 | 660 | 522 | 212 | 27 | 0 | 2928 |

SNOWFALL (inches) 1997 SAN ANTONIO, TX (SAT)

| YEAR | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | TOTAL |
|----------------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-------|
| 1968-69 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1969-70 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | T | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1970-71 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1971-72 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1972-73 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.8 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 |
| 1973-74 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1974-75 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1975-76 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1976-77 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1977-78 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.0 | T |
| 1978-79 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1979-80 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1980-81 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1981-82 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| 1982-83 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1983-84 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1984-85 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 | T | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 |
| 1985-86 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1986-87 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 |
| 1987-88 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 1988-89 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | T | T |
| 1989-90 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | T | T | 0.0 | 0.0 | T |
| 1990-91 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | 0.0 | T | T | 0.0 | T |
| 1991-92 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.0 | 0.0 | 0.0 | T |
| 1992-93 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | 0.0 | 0.0 | T | T | 0.0 | T |
| 1993-94 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | T | T | T | 0.0 | 0.0 | 0.0 | T |
| 1994-95 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1995-96 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T |
| 1996-97 | | | | | | | | | | | | | |
| 1997- | | | | | | | | | | | | | |
| POR= 53 YRS | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.5 | 0.2 | T | T | T | T | 0.7 |

WBAN : 12921

REFERENCE NOTES:

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|---|---|
| <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> |
|---|---|

1997
SAN ANTONIO,
TEXAS (SAT)

The city of San Antonio is located in the south-central portion of Texas on the Balcones escarpment. Northwest of the city, the terrain slopes upward to the Edwards Plateau and to the southeast it slopes downward to the Gulf Coastal Plains. Soils are blackland clay and silty loam on the Plains and thin limestone soils on the Edwards Plateau.

The location of San Antonio on the edge of the Gulf Coastal Plains is influenced by a modified subtropical climate, predominantly continental during the winter months and marine during the summer months. Temperatures range from 50 degrees in January to the middle 80s in July and August. While the summer is hot, with daily temperatures above 90 degrees over 80 percent of the time, extremely high temperatures are rare. Mild weather prevails during much of the winter months, with below-freezing temperatures occurring on an average of about 20 days each year.

San Antonio is situated between a semi-arid area to the west and the coastal area of heavy precipitation to the east. The normal annual rainfall of nearly 28 inches is sufficient for the production of most crops. Precipitation is fairly well distributed throughout the year with the heaviest amounts occurring during May and September. The precipitation from April through September usually occurs from thunderstorms. Large amounts of precipitation may fall during short periods of time. Most of the winter precipitation occurs as light rain or drizzle. Thunderstorms and heavy rains have occurred in all months of the year. Hail of damaging intensity seldom occurs but light hail is frequent with the springtime thunderstorms. Measurable snow occurs only once in three or four years. Snowfall of 2 to 4 inches occurs about every ten years.

Northerly winds prevail during most of the winter, and strong northerly winds occasionally occur during storms called northers. Southeasterly winds from the Gulf of Mexico also occur frequently during winter and are predominant in summer.

Since San Antonio is located only 140 miles from the Gulf of Mexico, tropical storms occasionally affect the city with strong winds and heavy rains. One of the fastest winds recorded, 74 mph, occurred as a tropical storm moved inland east of the city in August 1942.

Relative humidity is above 80 percent during the early morning hours most of the year, dropping to near 50 percent in the late afternoon.

San Antonio has about 50 percent of the possible amount of sunshine during the winter months and more than 70 percent during the summer months. Skies are clear to partly cloudy more than 60 percent of the time and cloudy less than 40 percent. Air carried over San Antonio by southeasterly winds is lifted orographically, causing low stratus clouds to develop frequently during the later part of the night. These clouds usually dissipate around noon, and clear skies prevail a high percentage of the time during the afternoon.

The first occurrence of 32 degrees Fahrenheit is in late November and the average last occurrence is in early March.

STATION LOCATION

SAN ANTONIO, TEXAS

| LOCATION | OCCUPIED FROM | OCCUPIED TO | AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION | LATITUDE NORTH | LONGITUDE WEST | ELEVATION ABOVE | | | | | | | | | | | REMARKS | |
|---|---------------|-------------|---|----------------|----------------|-----------------|------------------|-------------|---------------|----------|-------------------|----------------|------------|---------------|------------|------------|---------|---|
| | | | | | | SEA LEVEL | GROUND | | | | | | | | | | | |
| | | | | | | | WIND INSTRUMENTS | TEMPERATURE | PRECIPITATION | SUNSHINE | RELATIVE HUMIDITY | WIND DIRECTION | WIND SPEED | WIND VELOCITY | WIND FORCE | WIND STATE | | WIND TYPE |
| CITY Headquarters Building Fort Sam Houston, Texas | 3/07/85 | 7/15/91 | | 29° 27' | 98° 28' | | | | | | | | | | | | | Station established by Signal Corps. |
| Dulling Building Commerce & Alamo Sts. | 7/15/91 | 2/01/92 | 2.3 mi. SW | 29° 27' | 98° 28' | | | | | | | | | | | | | Records taken over by Weather Bureau. |
| Alamo Insurance Bldg. Navarro Street | 2/01/92 | 7/01/95 | 0.2 mi. WNW | 29° 27' | 98° 28' | | 75 | 66 | 66 | | | | | | | | | |
| Maverick Building Alamo Plaza & Houston Streets | 7/01/95 | 5/01/00 | 0.1 mi. E | 29° 27' | 98° 28' | 667 | 104 | 95 | 95 | | | | | | | | | |
| Hicks Building Avenue C & East Houston Street | 5/01/00 | 6/30/14 | 0.2 mi. E | 29° 27' | 98° 28' | 660 | 91 | 80 | 80 | | 72 | | | | | | | Tipping Bucket rain gage and sunshine recorder installed 11/7/02. |
| State Bank & Trust Bldg 313 East Houston Street | 6/30/14 | 7/01/30 | 0.3 mi. N | 29° 27' | 98° 28' | 649 | 132 | 119 | 119 | | 122 | | | | | | | Thermometers and rain gages 10 ft. lower prior to 5/12/16. |
| Alamo Nat'l. Bank Bldg. 306 West Commerce St. | 7/01/30 | 10/24/37 | 0.5 mi. WSW | 29° 27' | 98° 28' | 646 | 301 | 243 | 243 | | 235 | | | | | | | |
| Federal Building Alamo Plaza & Houston St. | 10/24/37 | 1/02/41 | 0.6 mi. ENE | 29° 27' | 98° 28' | 652 | 301 | 111 | 111 | | 103 | | | | | | | Wind instruments left on roof of Alamo National Bank Building. |
| AIRPORT Administration Building Stinson Field 7 miles SE of PO | 12/27/38 | 1/02/41 | | 29° 20' | 98° 28' | 567 | 59 | b28 | 28 | | | | | | | | | a - 27 ft. to 7/1/39. b - Installed 7/1/39. Record observations transferred to Airport 7/1/39. |
| Administration Building Stinson Field | 1/02/41 | 7/14/42 | | 29° 20' | 98° 28' | 567 | 63 | 7 | 7 | | 28 | | | | | | | WBO and WBAS consolidated at Airport. |
| East Lean-To, Hangar #2 San Antonio Airport | 7/14/42 | 8/15/53 | 12.8 mi. N | 29° 32' | 98° 28' | 782 | 51 | 8 | 8 | | 4 | | | | | | | |
| Feeder Lines Terminal Building, San Antonio International Airport | 8/15/53 | 5/24/72 | 1200 ft. NW | 29° 32' | 98° 28' | c788 | a23 | 5 | 5 | | 4 | | | | | | | a - 33 ft. to 9/1/61. b - Telesychrometer (4') 10/17/48 - removed 1/20/69. Hygro. comm. 1000' NE of thermometer site 4/1/64. c - 792 ft. to 4/1/64. |
| North Crown Building 830 N.E. Loop 410 International Airport | 5/24/72 | Present | 1.1 mi. SE | 29° 32' | 98° 28' | 788 | 23 g23 | NA | NA | 80 | 74 | f74 | 74 | d4 h5 | NA | | | d - Same site as prior to 5/24/72. f - Added 9/1/76. g - Minor adjustment 5/1/86. h - Minor move & type change 5/1/86. |
| | | | | | | | | | | | | | | | | | | S ASOS Commissioned 06/01/95 |

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