

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration National Weather Service Western Region P. O. Box 11188 Federal Building Salt Lake City, Utah 84147

December 16, 1991

W/WR3:KBM

MEMORANDUM FOR:

Recipients of Western Region Technical Memorandums

Len Mell

FROM:

W/WR3 - Kenneth B. Mielke

SUBJECT:

NOAA Technical Memorandum NWS WR-28 - Weather

Extremes (Revised October 1991)

Please make the following pen and ink changes to Technical Memorandum NWS WR-28 (Revised October 1991). The bolding indicates the actual corrections.

TABLE 2

UTAH -69 PETER SINK (LOGAN CANYON) FEB 1 1985

WASHINGTON -48 MAZAMA DEC 30 1968; WINTHROP DEC 30 1968

TABLE 4

NEVADA 7.40 LEWER'S RANCH MAR 19 1907

WASHINGTON 14.26 MT. MITCHELL #2 NOV 23-24 1986





NOAA Technical Memorandum NWS WR-28

WEATHER EXTREMES

Robert J. Schmidli National Weather Service Weather Service Forecast Office Phoenix, Arizona

February 1986 (Revised) October 1991 (Revised)



NOAA TECHNICAL MEMORANDA National Weather Service, Western Region Subseries

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NOAA Technical Memorandum NWS WR-28

WEATHER EXTREMES

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First Printed April 1968 Revised February 1986 Second Revision October 1991

UNITED STATES
DEPARTMENT OF COMMERCE
Robert A. Mosbacher, Secretary

National Oceanic and Atmospheric Administration John A. Knauss, Under Secretary and Administrator National Weather Service

Elbert W. Friday, Jr., Assistant

Administrator for Weather Services



This publication has been reviewed and is approved for publication by Scientific Services Division,

Western Region.

Kenneth B. Mielke, Chief

Scientific Services Division

Salt Lake City, Utah

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PREFACE

The purpose of this publication is to provide National Weather Service personnel with a ready reference of information that my be useful when preparing weather stories and radio scripts, when talking to mass-media reporters, and when answering questions from the general public. This eighth revision differs from the seventh revised tabulation in that a number of new extremes have been updated and previous errors have been corrected.

The memorandum is organized into fifteen categories covering the elements of temperature, precipitation, snowfall, atmospheric pressure, and wind. The fourteen western cities, thirteen western states, United States, North America, and world are each listed in the various categories.

Only official observations are included in this memorandum. The exception being, a few well-accepted unofficial extremes, such as the twenty-four hour precipitation of 38.70 inches at Yankeetown, Florida, the 38.20 inches at Thrall, Texas, and the 43.00 inches at Alvin, Texas.

Several unofficial observations of maximum rainfall amounts far exceed the data published here but were excluded largely on the advice of state climatologists.

An example of such an unofficial extreme was found in the August 1898 "Climate and Crop Service". It was the account of the observer at Fort Mohave, Arizona. "On the 28th, we had the biggest rain in 10 or 15 years, and to my regret, between the rain and the furious wind, my rain gauge was upset. To give an idea of the amount of rain that fell, and which lasted only 45 minutes, I had a wash tub set out on the mesa, clear of everything, and the water after the rain, measured 8 inches."

There was some question regarding the greatest snowfall in one storm for a few states. The problem is one of separating storms. When does one end and another begin? For example, the 84.6 inches of snowfall at Flagstaff, Arizona, in December 1967 was not included because it resulted from two storms with 27 hours of no precipitation between them. Although the Ruby, Colorado, snowstorm that produced 141.0 inches was included, there was some doubt that this storm actually lasted a full week.

Data are for a combination of city office and airport locations. In cases where dual records were kept over some period of time and an event occurred during that period, the most extreme value was used.

There is little doubt that more extreme values have occurred than have been listed here. First of all, very few observing stations have records more than 100 years in duration. Secondly, the areas where weather extremes are most likely to occur are usually the most sparsely settled and where observations are not generally available.

We gratefully acknowledge the assistance of the Meteorologists in Charge of various cities and the former climatologists for the various states in checking the data for this revision.

Special acknowledgement is given to Mr. Marvin Magnuson, former Assistant Chief, Scientific Services Division, for his assistance.

The data in this Technical Memorandum are considered accurate through December 1990.

TABLE 1

HIGHEST TEMPERATURE (FAHRENHEIT)

ALBUQUERQUE ANCHORAGE BOISE CHEYENNE DENVER HELENA HONOLULU LAS VEGAS LOS ANGELES PHOENIX PORTLAND SALT LAKE CITY SAN FRANCISCO SEATTLE	100 105 105 94 117 112 122 107	JUN 28 1974; JUL 14 1979; JUN 29 1980; JUL 5/18 1980 JUN 25 1953 JUL 19 1960 JUL 14/15 1881; JUL 11 1939; JUN 23 1954 AUG 8 1878 AUG 24 1969 OCT 6 1984; SEP 7 1986; SEP 5 1987; SEP 6 1988 JUL 24 1942 JUN 26 1990 JUN 26 1990 JUL 2 1942; JUL 30 1965; AUG 10 1981 JUL 26 1960 JUN 14 1961 JUL 16 1941 JUN 9 1955
ALASKA ARIZONA CALIFORNIA COLORADO HAWAII IDAHO MONTANA NEVADA NEW MEXICO OREGON	118 100 118 117 122	FORT YUKON JUN 27 1915 FORT MOHAVE JUN 15 1896; PARKER JUL 7 1905 GREENLAND RANCH DEATH VALLEY JUL 10 1913 BENNETT JUL 11 1888 PAHALA APR 27 1931 OROFINO JUL 28 1934 GLENDIVE JUL 20 1893; MEDICINE LAKE JUL 5 1937 LEELAND AUG 12/18 1914; OVERTON JUN 23 1954; LAUGHLIN JUN 26 1990 ARTESIA JUN 29 1918; OROGRANDE JUL 14 1934 PRINEVILLE JUL 29 1898; PENDLETON AUG 10 1898
UTAH WASHINGTON WYOMING	117 118 115	SAINT GEORGE JUL 5 1985 WAHLUKE JUL 24 1928; ICE HARBOR DAM AUG 5 1961 BASIN AUG 8 1983; DIVERSION DAM JUL 15 1988
UNITED STATES	134	GREENLAND RANCH DEATH VALLEY CALIFORNIA JUL 10 1913
NORTH AMERICA WORLD	134 136	GREENLAND RANCH DEATH VALLEY CALIFORNIA U.S. JUL 10 1913 AZIZIA LIBYA SEP 13 1922

TABLE 2

LOWEST TEMPERATURE (FAHRENHEIT)

ALBUQUERQUE -17 ANCHORAGE -38 BOISE -25 CHEYENNE -38 DENVER -30 HELENA -42 HONOLULU 53 LAS VEGAS 8 LOS ANGELES 28 PHOENIX 16 PORTLAND -3 SALT LAKE CITY -30 SAN FRANCISCO 20 SEATTLE 0	JAN 31 1893; JAN 25 1957 JAN 31 1972; FEB 1/2 1976; FEB 9 1981; FEB 12 1983 JAN 25 1937; JAN 13 1963 JAN 4 1949 JAN 7 1913 FEB 2 1950
ALASKA -80 ARIZONA -40 CALIFORNIA -45 COLORADO -61 HAWAII 12 IDAHO -60 MONTANA -70 NEVADA -50 NEW MEXICO -50 OREGON -54 UTAH -50 WASHINGTON -48 WYOMING -63	HAWLEY LAKE JAN 7 1971 BOCA JAN 20 1937 MAYBELL FEB 1 1985 MAUNA KEA OBSERVATORY MAY 17 1979 ISLAND PARK DAM JAN 18 1943 ROGERS PASS JAN 20 1954 SAN JACINTO JAN 8 1937 GAVILAN FEB 1 1951 UKIAH FEB 9 1933; SENECA FEB 10 1933 PETER SINK (LOGAN CANYON) FEB 1 1985 MAZAMA DEC 10 1968; WINTHROP DEC 30 1968
UNITED STATES -80	PROSPECT CREEK (25 SE BETTLES) ALASKA JAN 23 1971
NORTH AMERICA -81	SNAG YUKON TERRITORY CANADA FEB 3 1947
WORLD -129 -121 -110 -90 -90 -87	VOSTOK ANTARCTICA EL 11220 FT JUL 21 1983 PLATEAU STATION ANTARCTICA EL 11890 FT AUG 24 1966 SOUTH POLE ANTARCTICA EL 9186 FT JUL 14 1963 OIMEKON SIBERIA U.S.S.R. EL 2625 FT FEB 6 1933 VERKHOYANSK SIBERIA U.S.S.R. FEB 5/7 1892 NORTHICE GREENLAND EL 7690 FT JAN 9 1954

SALT LAKE CITY SAN FRANCISCO SEATTLE ALASKA ARIZONA CALIFORNIA COLORADO HAWAII IDAHO MONTANA NEVADA NEW MEXICO OREGON UTAH	0.84 1.05 3.52 11.50 3.45 12.00 1.50 1.86 3.66	OCT 10 1983 SEP 11 1976 AUG 1 1985 AUG 23 1921 AUG 21 1983 APR 21 1924 AUG 21 1957 NOV 19 1967 AUG 18 1966 JUN 7 1927 JUL 13 1962 DEC 3 1980 JUN 29 1952 ANNETTE OCT 29 1958 TEMPE CITRUS EXPERIMENT STATION SEP 14 1969 CAMPO AUG 12 1981 (80-MINUTE AMOUNT) LAKE GEORGE JUL 31 1945 KILAUEA SUGAR PLANTATION JAN 24/25 1956 COTTONWOOD AUG 1 1948 BILLINGS JUL 2 1958 ELKO AUG 27 1970 RATON JUN 17 1965 COPPER JUN 8 1943 BLANDING AUG 1 1968
WYOMING	3.64	CHEYENNE AUG 1 1985
UNITED STATES	$12.00 \\ 12.00$	HOLT MISSOURI JUN 22 1947 KILAUEA SUGAR PLANTATION HAWAII JAN 24/25 1956
NORTH AMERICA	12.00	HOLT MISSOURI U.S. JUN 22 1947
WORLD	12.00 12.00	HOLT MISSOURI U.S. JUN 22 1947 KILAUEA SUGAR PLANTATION HAWAII U.S. JAN 24/25 1956

DENVER HELENA HONOLULU LAS VEGAS	2.59 7.36 4.98 7.66 2.72	AUG 25/26 1989 MAR 5 1871 AUG 1 1985 MAY 21/22 1876 JUN 4/5 1908 MAR 5/6 1958 AUG 20/21 1957 DEC 31 1933-JAN 1 1934 JUL 1/2 1911 DEC 12/13 1882 MAY 2/3 1901 JAN 4/5 1982
HAWAII	11.40 26.12 11.08 38.00 7.17 11.50 7.13	KILAUEA SUGAR PLANTATION JAN 24/25 1956 RATTLESNAKE CREEK (ELMORE COUNTY) NOV 23 1909 CIRCLE JUN 20 1921 MT. ROSE HIGHWAY STATION (NEAR RENO) JAN 31 1963 LAKE MALOYA MAY 19 1955 GLENORA DEC 21 1915 BUG POINT (24 E BLANDING) SEP 5 1970 QUINAULT RANGER STATION JAN 21 1935
UNITED STATES NORTH AMERICA	38.70 38.20 43.00	ALVIN TEXAS JUL 25/26 1979 YANKEETOWN FLORIDA SEP 5/6 1950 THRALL TEXAS SEP 9/10 1921 ALVIN TEXAS U.S. JUL 25/26 1979 YANKEETOWN FLORIDA U.S. SEP 5/6 1950 THRALL TEXAS U.S. SEP 9/10 1921
WORLD	73.62	CILAOS LA REUNION MAR 15/16 1952

DENVER HELENA HONOLULU LAS VEGAS LOS ANGELES	9.77 7.66 7.66 8.57 6.67 20.79 3.39 15.80 6.47 20.14 7.04	JUN 1852 AUG 1989 MAR 1871 APR 1900 MAY 1876 MAY 1927 MAR 1951 SEP 1939 DEC 1889 JUL 1911 DEC 1882 SEP 1982 JAN 1862 DEC 1933
ARIZONA CALIFORNIA COLORADO HAWAII IDAHO MONTANA NEVADA NEW MEXICO	33.03 16.93 50.20 25.45	CROWN KING AUG 1951 HELENA MINE JAN 1909 RUBY FEB 1897 KUKUI MAR 1942 ROLAND DEC 1933 CIRCLE JUN 1921 MT. ROSE HIGHWAY STATION (NEAR RENO) DEC 1964 CARLSBAD CAVERNS JUN 1986 GLENORA NOV 1909 ALTA DEC 1983
UNITED STATES NORTH AMERICA	107.00 88.01	KUKUI HAWAII MAR 1942 SWANSON BAY BRITISH COLUMBIA CANADA NOV 1917
WORLD	366.14	CHERRAPUNJI INDIA JUL 1861

ALBUQUERQUE ANCHORAGE	16.30 27.55	1858 1989
BOISE	27.55 25.80	1871
CHEYENNE	23.69	1942
DENVER	23.31	1942
HELENA	20.94	1975
HONOLULU	$\frac{20.94}{42.78}$	
LAS VEGAS	$\frac{42.78}{10.72}$	1965 1941
LOS ANGELES	40.29	1884
PHOENIX	19.73	1905
PORTLAND	67.24	1882
SALT LAKE CITY		1983
SAN FRANCISCO		1983
SEATTLE	55.14	1950
ALASKA	332.29	MAC LEOD HARBOR 1976
ARIZONA	58.92	HAWLEY LAKE 1978
CALIFORNIA	153.54	MONUMENTAL 1909
COLORADO	92.84	RUBY 1897
HAWAII	704.83	KUKUI 1982 (739.33 DEC 1981 THRU NOV 1982)
IDAHO	81.05	ROLAND 1933
MONTANA	55.51	SUMMIT 1953
	55.51	GRINNELL GLACIER (184.64 JUL 17 1958 THRU AUG 4
		1959)
NEVADA	59.03	MT. ROSE RESORT 1969
NEW MEXICO	62.45	WHITE TAIL 1941 WAI SETT 1937
OREGON	168.88	VALSETZ 1937
UTAH	108.54	
WASHINGTON	184.56	
WYOMING	55.46	GRASSY LAKE DAM 1945
UNITED STATES	704.83	KUKUI HAWAII 1982 (739.33 DEC 1981 THRU NOV 1982)
NORTH AMERICA	332.29	MAC LEOD HARBOR ALASKA U.S. 1976
WORLD	905.12	CHERRAPUNJI INDIA 1861 (1041.78 AUG 1860 THRU JUL 1861)

ALBUQUERQUE ANCHORAGE BOISE CHEYENNE DENVER HELENA HONOLULU LAS VEGAS LOS ANGELES PHOENIX PORTLAND SALT LAKE CITY SAN FRANCISCO SEATTLE	3.29 8.08 6.64 5.94 6.27 6.26 5.03 0.56 4.08 2.82 22.48 8.70 8.73 19.52	1917 1969 1966 1964 1954 1973 1983 1953 1953 1956 1985 1979
ALASKA	1.61	BARROW 1935
ARIZONA	0.07	DAVIS DAM 1956
CALIFORNIA	0.00 0.00	GREENLAND RANCH DEATH VALLEY 1929 BAGDAD 1913
COLORADO	1.69	BUENA VISTA 1939
HAWAII	0.19	KAWAIHAE 1953
IDAHO	2.09	GRAND VIEW 1947
MONTANA	2.97	BELFRY 1960
NEVADA	TRACE	HOT SPRINGS 1898
NEW MEXICO	0.91	VILLANUEVA 1983
OREGON	3.33	WARM SPRINGS RESERVOIR 1939
UTAH	1.34	
WASHINGTON	2.61	WAHLUKE 1930
WYOMING	1.28	LYSITE 1960
UNITED STATES	0.00 0.00	GREENLAND RANCH DEATH VALLEY CALIFORNIA 1929 BAGDAD CALIFORNIA 1913 (TRACE 767 DAYS OCT 3 1912 THRU NOV 8 1914)
NORTH AMERICA	0.00	GREENLAND RANCH DEATH VALLEY CALIFORNIA U.S. 1929
	0.00	BAGDAD CALIFORNIA U.S. 1913
WORLD	0.00	GREENLAND RANCH DEATH VALLEY CALIFORNIA U.S. 1929
	0.00	BAGDAD CALIFORNIA U.S. 1913
	0.00	IQUIQUE CHILE NOV 1945 THRU MAY 1957
	0.00	AŘICÁ CHILE OCT 1903 THRU DEC 1917
	0.00	
	0.00	WADI HALFA SUDAN JUN 1945 THRU APR 1949

 $\frac{\text{TABLE 8}}{\text{GREATEST SNOWFALL IN TWENTY-FOUR HOURS (INCHES)}}$

LAS VEGAS LOS ANGELES PHOENIX PORTLAND SALT LAKE CITY	23.6 21.5 0.0 9.0 2.0 1.0 16.0 18.4 3.7	DEC 28/29 1958 DEC 28.29 1955 DEC 16/17 1884 NOV 20 1979 DEC 24 1982 NOV 11/12 1959 JAN 4/5 1974 JAN 15 1932 JAN 20 1933 JAN 20/21 1937 JAN 31 - FEB 1 1937 OCT 17/18 1984 FEB 5 1887 FEB 2 1916
ALASKA ARIZONA CALIFORNIA COLORADO HAWAII IDAHO MONTANA NEVADA NEW MEXICO OREGON UTAH WASHINGTON WYOMING	62.0 38.0 67.0 75.8 30.0 44.0 36.0 34.0 39.0 38.0 52.0 41.0	THOMPSON PASS DEC 28/29 1955 HEBER RANGER STATION DEC 14 1967 ECHO SUMMIT JAN 4/5 1982 SILVER LAKE APR 14/15 1921 (REGULAR MEASUREMENTS OF THE SNOWFALL ON MAUNA KEA AND MAUNA LOA ARE NOT MADE) PIERCE RANGER STATION DEC 28 1968 SUMMIT JAN 20 1972 DAGGETT PASS FEB 14/15 1969 RED RIVER NOV 29 1975 BONNEVILLE DAM JAN 8/9 1980 ALTA DEC 1/2 1982 WINTHROP JAN 21 1935 GLENROCK APR 19 1973
UNITED STATES NORTH AMERICA		SILVER LAKE COLORADO APR 14/15 1921 SILVER LAKE COLORADO U.S. APR 14/15 1921 LIVINGSTON RANGER STATION ALBERTA CANADA JUN 29 1963

 $\beta = \{ \frac{1}{4\pi^2}, \delta, \gamma, \beta \}$

 $\frac{\text{TABLE 9}}{\text{GREATEST SNOWFALL IN ONE STORM (INCHES)}}$

LAS VEGAS LOS ANGELES	23.6 25.6 45.7 28.5 O.O 9.0 2.0 1.0	DEC 28-29 1958 DEC 26-30 1955 DEC 15-17 1884 NOV 19-21 1979 DEC 1-6 1913 DEC 5-14 1917 JAN 4-5 1974 JAN 15 1932 JAN 20 1933; JAN 20-21 1937 DEC 21-24 1892
SALT LAKE CITY		
SAN FRANCISCO		
SEATTLE	32.5	JAN 31-FEB 2 1916
**		
ALASKA	175.4	THOMPSON PASS DEC 26-31 1955
ARIZONA	67.0	HEBER RANGER STATION DEC 13-16 1967
CALIFORNIA	189.0	MT. SHASTA SKI BOWL FEB 13-19 1959
COLORADO	141.0	RUBY MAR 23-30 1899
HAWAII		(REGULAR MEASUREMENTS OF THE SNOWFALL ON
		MAUNA KEA AND MAUNA LOA ARE NOT MADE)
	60.0	
MONTANA		SUMMIT JAN 17-22 1972
	75.0	MT. ROSE RESORT JAN 18-22 1969
NEW MEXICO		
OREGON	119.0	CRATER LAKE MAR 16-25 1975
UTAH	105.0	ALTA JAN 24-30 1965
WASHINGTON	129.0	
WYOMING	58.0	GLENROCK APR 18-20 1973
UNITED STATES	189.0	MT. SHASTA SKI BOWL CALIFORNIA FEB 13-19 1959
NORTH AMERICA	189.0	MT. SHASTA SKI BOWL CALIFORNIA U.S. FEB 13-19 1959

 $\frac{\text{TABLE 10}}{\text{GREATEST SNOWFALL IN ONE CALENDAR MONTH (INCHES)}}$

ALBUQUERQUE ANCHORAGE BOISE CHEYENNE DENVER HELENA HONOLULU LAS VEGAS LOS ANGELES PHOENIX PORTLAND SALT LAKE CITY	14.7 48.5 36.6 46.5 57.4 46.4 0.0 16.7 2.0 1.0 41.4 41.9	DEC 1959 FEB 1955 DEC 1884 APR 1905 DEC 1913 DEC 1880 JAN 1949 JAN 1932 JAN 1933; JAN 1937 JAN 1950 MAR 1977
SAN FRANCISCO	3.7	FEB 1887
SEATTLE	57.2	JAN 1950
CALIFORNIA COLORADO	346.1 123.0 390.0 249.0 143.8 131.1 139.0 144.0 256.0 244.5 363.0 188.5	THOMPSON PASS FEB 1964 SUNRISE MOUNTAIN MAR 1973 TAMARACK JAN 1911 RUBY MAR 1899 (REGULAR MEASUREMENTS OF THE SNOWFALL ON MAUNA KEA AND MAUNA LOA ARE NOT MADE) BURKE JAN 1954 SUMMIT JAN 1972 DAGGETT PASS FEB 1969 ANCHOR MINE MAR 1912 CRATER LAKE JAN 1933 ALTA DEC 1983 RAINIER PARADISE RANGER STATION JAN 1925 BECHLER RIVER JAN 1933
UNITED STATES NORTH AMERICA	390.0 390.0 202.0	TAMARACK CALIFORNIA JAN 1911 TAMARACK CALIFORNIA U.S JAN 1911 KEMANO KILDALA PASS BRITISH COLUMBIA CANADA FEB 1954

 $\frac{\text{TABLE 11}}{\text{GREATEST SNOWFALL IN ONE SEASON (INCHES)}}$

ALBUQUERQUE	37.4	1972-1973
ANCHŎRAGĚ	132.6	1954-1955
BOISE	50.0	1916-1917
CHEYENNE	121.5	1979-1980
DENVER	118.7	1908-1909
HELENA	112.8	1880-1881
HONOLULU	0.0	2000 2001
LAS VEGAS	16.7	1948-1949
LOS ANGELES	2.0	1931-1932
PHOENIX	1.0	1932-1933; 1936-1937
PORTLAND	60.9	1892-1893
SALT LAKE CITY	117.3	1951-1952
SAN FRANCISCO	3.7	1886-1887
SEATTLE	67.5	1968-1969
	01.0	1300-1303
ALASKA	974.5	THOMPSON PASS 1952-1953
ARIZONA	400.9	SUNRISE MOUNTAIN 1972-1973
CALIFORNIA	884.0	TAMARACK 1906-1907
COLORADO	837.5	WOLF CREEK PASS 1978-1979
HAWAII	001.0	(REGULAR MEASUREMENTS OF THE SNOWFALL ON
1121472111		MAUNA KEA AND MAUNA LOA ARE NOT MADE)
IDAHO	441.8	ROLAND WEST PORTAL 1949-1950
MONTANA	418.1	COOKE CITY 1977-1978
NEVADA	410.1 412.0	DAGGETT PASS 1968-1969
NEW MEXICO	483.0	ANCHOR MINE 1911-1912
OREGON	879.0	CRATER LAKE 1932-1933
UTAH	846.8	ALTA 1982-1983
WASHINGTON	1122.0	RAINIER PARADISE RANGER STATION 1971-1972
WYOMING	491.6	BECHLER RIVER 1932-1933
WIOMING	491.0	DECTMENT INVENT 1302-1300
UNITED STATES	1122.O	RAINIER PARADISE RANGER STATION WASHINGTON
CHILED STATES	1122.0	1971-1972
		T211-T217
NORTH AMERICA	1100 0	RAINIER PARADISE RANGER STATION WASHINGTON
MORTH AMERICA	1122.0	U.S. 1971-1972
	880.0	KEMANO KILDALA PASS BRITISH COLUMBIA CANADA
	000.0	1956-1957
		1200-1201

TABLE 12

GREATEST DEPTH OF SNOW ON THE GROUND (INCHES)

ALBUQUERQUE	14	DEC 29 1958
ANCHŎRAGĚ	47	DEC 30/31 1955; JAN 1 1956
BOISE	22	DEC 17 1884
CHEYENNE	26	NOV 22/23 1979
DENVER	33	DEC 6 1913
HELENA	24	DEC 13 1917; JAN 27 1969
HONOLULU	0	
LAS VEGAS	8 2	JAN 5 1974
LOS ANGELES	2	JAN 15 1932
PHOENIX	1	JAN 20 1933; JAN 21 1937
PORTLAND	19	FEB 6 1893
SALT LAKE CITY	23	JAN 31 1942
SAN FRANCISCO	4	
SEATTLE	29	
Committee and an analysis		1115 2 1010
ALASKA	190	THANE CAMP #4 MAR 28 1917
ARIZONA	91	HAWLEY LAKE DEC 21 1967
CALIFORNIA	451	TAMARACK MAR 11 1911
COLORADO	254	
HAWAII		(RECITIAR MEASUREMENTS OF THE DEPTH OF SNOW
		ON THE GROUND ON MAUNA KEA AND MAUNA LOA
		ARE NOT MADE, BUT DRIFTS OF MORE THAN 8 FEET
		HAVE BEEN OBSERVED ON THE SUMMIT OF MAUNA
		KEA)
IDAHO	182	MULLAN PASS FEB 20 1954
IDAHO MONTANA NEVADA	190	MULLAN PASS FEB 20 1954 SUMMIT FEB 1 1972 DAGGETT PASS FEB 27 1969 SANDIA CREST APR 4 1973 TIMBERLINE LODGE MAR 19 1950
NEVADA	175	DACCETT PASS FER 27 1969
NEW MEXICO	95	SANDIA CREST APR 4 1973
OREGON	246	TIMBERLINE LODGE MAR 19 1950
UTAH	179	ALTA APR 5 1958
WASHINGTON	367	RAINIER PARADISE RANGER STATION MAR 9 1956
WYOMING	96	BECHLER RIVER MAR 3 1939; SNAKE RIVER MAR 8/9
11 1 01111110	50	1974
and the second s		e avia La Martine de Carlos d
UNITED STATES	451	TAMARACK CALIFORNIA MAR 11 1911
CHILD DIAIRD	- 10 T	THE TOTAL OF STATE OF STATE AND THE PARTY.
NORTH AMERICA	451	TAMARACK CALIFORNIA U.S. MAR 11 1911
TACTALLI UMITHMOU	ユロエ	THE THEOLY OF THE STATE OF THE TATE

ALBUQUERQUE ANCHORAGE BOISE CHEYENNE DENVER HELENA HONOLULU LAS VEGAS LOS ANGELES PHOENIX PORTLAND SALT LAKE CITY SAN FRANCISCO SEATTLE	1044.7 / 30.85 1053.2 / 31.10 1054.2 / 31.13 1054.5 / 31.14 1057.9 / 31.24 1063.3 / 31.40 1062.8 / 30.32 1043.0 / 30.80 1035.9 / 30.59 1036.9 / 30.62 1044.4 / 30.84 1052.8 / 31.09 1037.6 / 30.64 1044.0 / 30.83	DEC 22 1967 JAN 18 1962 JAN 21 1930 JAN 10 1962 JAN 10 1962 JAN 9 1962 FEB 10 1919 DEC 22 1967 FEB 17 1883 DEC 24 1898; JAN 24 1938 FEB 2 1880 DEC 8/9 1956 MAR 4 1902 DEC 3 1921 BARROW JAN 3 1970
ALASKA ARIZONA CALIFORNIA COLORADO HAWAII IDAHO MONTANA NEVADA NEW MEXICO OREGON UTAH WASHINGTON WYOMING	1056.8 / 31.21 1041.0 / 30.74 1060.6 / 31.32 1026.8 / 30.32	BARROW JAN 3 1970 GRAND CANYON DEC 22 1967 SACRAMENTO FEB 17 1883 ALAMOSA DEC 14 1964 HONOLULU FEB 10 1919 LIHUE JAN 27 1955 IDAHO FALLS JAN 1 1979 MILES CITY DEC 24 1983 ELKO DEC 9 1956 FARMINGTON DEC 22 1967 BAKER JAN 1 1979 MILFORD DEC 9 1956 WALLA WALLA JAN 1 1979 CASPER JAN 9 1962
UNITED STATES		NORTHWAY ALASKA JAN 31 1989
NORTH AMERICA	1078.6 / 31.85	NORTHWAY ALASKA JAN 31 1989
WORLD	1078.9 / 31.86 1078.6 / 31.85	AGATA SIBERIA U.S.S.R. DEC 31 1968 BARNAUL SIBERIA U.S.S.R. JAN 23 1900 NORTHWAY ALASKA JAN 31 1989 IRKUTSK SIBERIA U.S.S.R. JAN 14 1893

ALBUQUERQUE ANCHORAGE BOISE CHEYENNE DENVER HELENA HONOLULU LAS VEGAS LOS ANGELES PHOENIX PORTLAND SALT LAKE CITY SAN FRANCISCO SEATTLE	983,1 / 29.03 952.9 / 28.14 981.0 / 28.97 977.3 / 28.86 976.3 / 28.83 979.3 / 28.92 993.6 / 29.34 987.8 / 29.17 990.6 / 29.25 992.1 / 29.30 967.2 / 28.56 982.4 / 29.01 977.0 / 28.85 973.9 / 28.76	OCT 5 1948 JAN 1 1948 DEC 23 1955 JAN 12 1932 FEB 9 1960 JAN 11 1932 FEB 3 1926 DEC 10 1949 JAN 17 1988 DEC 13 1984 JAN 9 1880 NOV 30 1982 JAN 27 1916 JAN 12 1980
ALASKA ARIZONA CALIFORNIA COLORADO HAWAII IDAHO MONTANA NEVADA NEW MEXICO OREGON UTAH WASHINGTON WYOMING	925.0 / 27.31 987.1 / 29.15 975.6 / 28.81 975.0 / 28.79 972.0 / 28.70 981.0 / 28.97 975.3 / 28.80 979.7 / 28.93 978.7 / 28.90 967.2 / 28.56 982.4 / 29.01 967.5 / 28.57 977.3 / 28.86	DUTCH HARBOR OCT 25 1977 FLAGSTAFF FEB 7 1937 POINT REYES JAN 27 1916 LAMAR MAR 13 1973 BARKING SANDS NOV 23 1982 BOISE DEC 23 1955 HAVRE JAN 11 1932 WINNEMUCCA JAN 27 1916 CLAYTON FEB 8/9 1960 PORTLAND JAN 9 1880 SALT LAKE CITY NOV 30 1982 TATOOSH ISLAND DEC 6 1952 CHEYENNE JAN 12 1932
UNITED STATES	892.3 / 26.35	MATECUMBE KEY FLORIDA SEP 2 1935
NORTH AMERICA	892.3 / 26.35	MATECUMBE KEY FLORIDA U.S. SEP 2 1935
WORLD	870.0 / 25.69	520 MILES NORTHWEST OF GUAM BY DROPSONDE IN EYE OF TYPHOON TIP (16° 44'N, 137° 46'E) OCT 12 1979
	876.0 / 25.87264	MILES WEST OF GUAM BY DROPSONDE IN EYE OF TYPHOON JUNE NOV 19 1975
	877.0 / 25.90750	MILES EAST OF LUZON PHILIPPINES BY DROPSONDE IN EYE OF TYPHOON IDA SEP 24 1958
	877.4 / 25.91420	

888.0 / 26.22

230 MILES EAST SOUTHEAST OF ISLAND OF COZUMEL MEXICO BY DROPSONDE IN EYE OF HURRICANE GILBERT (19.5 N, 83.5 W) SEP 13 1988

TABLE 15 HIGHEST WIND SPEED (MILES PER HOUR)

ALBUQUERQUE	90	FASTEST MILE DEC 9 1943
ANCHORAGE	75	PEAK GUST MAR 3 1989
	66	FASTEST MILE APR 14 1945; NOV 23 1950
ROICE	61	FASTEST MILE JUL 29 1944
BOISE CHEYENNE DENVER		
CHEIENNE	75	FASTEST MILE MAR 6 1972
DENVER	70	PEAK GUST APR 16 1960; JUL 25 1965
	65	FASTEST MILE MAY 22 1933
HELENA	73	FASTEST MILE JAN 17 1944; FEB 16 1949
HONOLULU	83	PEAK GUST JAN 17 1959
	67	FASTEST MILE JAN 17 1959
LAS VEGAS	90	PEAK GUST AUG 8 1989
		FASTEST MILE JUL 14 1971; JUL 29 1976
LOS ANGELES PHOENIX PORTLAND SALT LAKE CITY	62	PEAK GUST MAR 1 1952
DEIOEMIA DEIOEMIA	02	
PODEL AND	86	PEAK GUST JUL 7 1976
PORTLAND	90	PEAK GUST OCT 12 1962
	88	FASTEST MILE OCT 12 1962
SALT LAKE CITY	94	PEAK GUST JUN 3 1963
	71	
SAN FRANCISCO	58	ONE MINUTE JAN 30 1963
SAN FRANCISCO SEATTLE	66	FASTEST MILE NOV 14 1981
ALASKA	94	FASTEST MILE VALDEZ JAN 10 1980
	93	
		PEAK GUST ATTU DEC 7 1950
ADIZONIA		
ARIZONA	92	PEAK GUST MESA AUG 13 1983
CALIFORNIA		PEAK GUST SANDBERG MAR 25 1975
	77	ONE MINUTE SANDBERG FEB 10 1960
COLORADO	80	FASTEST MILE PUEBLO JAN 17 1950
	143	PEAK GUST BOULDER JAN 11 1972
HAWAII	103	PEAK GUST KILAUEA POINT AUG 7 1959
IDAHO	72	
MONTANA	82	
NEVADA	80	
NEW MEXICO		PEAK GUST RATON FEB 1 1963
	90	
OREGON	96	PEAK GUST ASTORIA OCT 12 1962
	88	FASTEST MILE PORTLAND OCT 12 1962
UTAH	94	PEAK GUST SALT LAKE CITY JUN 3 1963
	71	
WASHINGTON		FASTEST MILE NORTH HEAD JAN 29 1921
WYOMING	96	
WIOMING	84	
	04	TAGIEGI MILLE SHEMUMN NOV 4/ 1949
	001	DEAR OTION AND WACTUMONOM MOVE
UNITED STATES	231	PEAK GUST MT. WASHINGTON NEW
		HAMPSHIRE APR 12 1934
	188	FIVE MINUTE MT. WASHINGTON NEW
		HAMPSHIRE APR 12 1934

NORTH AMERICA	231 PEAK GUST MT. WASHINGTON NEW
	HAMPSHIRE U.S. APR 12 1934
	188 FIVE MINUTE MT. WASHINGTON NEW
	HAMPSHIRE U.S. APR 12 1934
WODID	OOL DEATZ CLICE NEW WACHTNOON NEW
WORLD	231 PEAK GUST MT. WASHINGTON NEW
	HAMPSHIRE U.S. APR 12 1934
	188 FIVE MINUTE MT. WASHINGTON NEW
	HAMPSHIRE U.S. APR 12 1934
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TECHNICAL REPORTS--Journal quality with extensive details, mathematical developments, or data listings.

TECHNICAL MEMORANDUMS--Reports of preliminary, partial, or negative research or technology results, interim instructions, and the like.



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