

...DECEMBER 2012 REGIONAL CLIMATE SUMMARY...

SUMMARY FOR THE SAN FRANCISCO BAY AREA AND MONTEREY BAY AREA...

DECEMBER 2012 WAS AN ACTIVE WEATHER MONTH ACROSS THE REGION. MEASURABLE RAIN FELL ON NEARLY HALF OF ALL DECEMBER DAYS. TWO PRECIPITATION EVENTS PRODUCED HEAVY RAIN AND SIGNIFICANT RAIN TOTALS. THE FIRST OF THESE WAS AT THE BEGINNING OF THE MONTH AND THE SECOND A FEW DAYS BEFORE CHRISTMAS ON THE 22ND AND 23RD. A LINE OF THUNDERSTORMS ON SATURDAY THE 22ND SPAWNED A WEAK TORNADO NEAR WATSONVILLE. IN ADDITION...FLOODING OCCURRED ACROSS PORTIONS OF THE AREA ON SUNDAY THE 23RD. THE MONTH AS A WHOLE WAS NOT MUCH WARMER OR COOLER THAN THE 30-YEAR AVERAGE...BUT OVERNIGHT LOWS TENDED TO BE SLIGHTLY WARMER THAN NORMAL AND AVERAGE HIGH TEMPERATURES ACROSS THE SOUTHERN PART OF THE AREA WERE A BIT COOLER THAN NORMAL.

SATURDAY AND SUNDAY...DECEMBER 1ST AND 2ND...WAS A WET AND WINDY WEEKEND. THESE TWO DAYS WERE PART OF A FIVE-DAY STORMY PERIOD THAT BEGAN ON NOVEMBER 28. FIVE DAY RAIN TOTALS FROM WEDNESDAY NOVEMBER 28 THROUGH SUNDAY DECEMBER 2 ARE LISTED BELOW:

NORTH BAY...

NAPA COUNTY AIRPORT.....	3.06 INCHES
PETALUMA.....	5.75
NAPA.....	4.87
SANTA ROSA.....	6.44
SAN RAFAEL.....	7.35
SONOMA COUNTY AIRPORT.....	7.85
WOODACRE RAWS.....	8.86
KENTFIELD.....	9.48
ATLAS PEAK.....	10.20
HAWKEYE RAWS.....	10.46
PETRIFIED FOREST RD.....	11.22
MOUNT ST HELENA.....	12.95
VENADO.....	15.88

SAN FRANCISCO PENINSULA...

REDWOOD CITY.....	2.90
SAN FRANCISCO DOWNTOWN.....	3.78
SAN FRANCISCO AIPORT.....	4.09
LA HONDA RAWS.....	8.74

EAST BAY...

LIVERMORE.....	3.71
OAKLAND.....	3.84
CONCORD AIRPORT.....	4.02
CONCORD.....	4.67
DUBLIN FIRE STATION.....	4.70
RODEO FIRE STATION.....	5.07
RICHMOND CITY HALL.....	5.75
ORINDA FIRE STATION.....	5.96

SAINT MARY'S COLLEGE.....7.29
MOUNT DIABLO.....10.71

SOUTH BAY AND SANTA CRUZ COUNTY...

SAN JOSE.....2.45
MOFFETT FEDERAL AIRFIELD...2.66
SOQUEL.....3.55
SANTA CRUZ.....3.77
DAVENPORT.....3.78
GILROY.....4.20
WATSONVILLE AIRPORT.....4.36
MORGAN HILL.....4.78
COE STATE PARK.....5.58
CORRALITOS.....6.08
MOUNT HAMILTON.....7.57
EUREKA CANYON.....8.66
BOULDER CREEK.....8.85
BEN LOMOND.....9.04
LEXINGTON RESERVOIR.....9.57
LOMA PRIETA.....10.67
MOUNT UMUNHUM.....15.72

MONTEREY AND SAN BENITO COUNTIES...

BRADLEY.....0.64
PARKFIELD.....0.96
HOLLISTER.....1.73
HERNANDEZ.....2.29
PINNACLES NATL MON.....2.63
NWS MONTEREY.....3.00
MONTEREY AIRPORT.....3.32
SALINAS AIRPORT.....3.20
SALINAS.....3.44
FORT HUNTER LIGGETT.....3.46
MOUNT TORO.....3.94
SANTA RITA.....4.16
CARMEL VALLEY.....4.72
FREMONT PEAK.....6.30
CHEWS RIDGE.....7.08
ANDREW MOLERA.....7.48
PINYON PEAK.....8.86
BIG SUR.....10.52
BLACK CONE.....11.41
CHALK PEAK.....12.29
ANDERSON PEAK.....15.63
THREE PEAKS.....15.67
MINING RIDGE.....18.27

ALTHOUGH THESE FIVE DAYS WERE VERY WET WITH PERIODS OF HEAVY
RAIN...THE SOIL PRIOR TO THIS SERIES OF STORMS WAS RELATIVELY DRY
AND CAPABLE OF ABSORBING MUCH OF THE PRECIPITATION.
CONSEQUENTLY...ONLY MINOR NUISANCE FLOODING OCCURRED...MAINLY IN
LOW-LYING URBAN AREAS.

THE PERIOD FROM DECEMBER 3 THROUGH 10 WAS GENERALLY DRY AND MILD. ONE WEAK WEATHER SYSTEM PRODUCED MODERATE AMOUNTS OF RAIN LATE ON THE 4TH AND EARLY ON THE 5TH...BUT OTHERWISE DRY WEATHER PREVAILED. A WARM-UP NEAR THE END OF THIS TIME PERIOD PRODUCED RECORD DAILY HIGH TEMPERATURES AT A FEW LOCATIONS ON SUNDAY THE 9TH AND MONDAY THE 10TH. THIS WAS TO BE THE FINAL WARM SPELL OF 2012.

A SERIES OF COOL WEATHER SYSTEM PRODUCED LIGHT AMOUNTS OF PRECIPITATION FROM THE 12TH THROUGH THE 17TH. THE WEATHER SYSTEM ON THE 17TH BROUGHT WITH IT A VERY COOL AIRMASS. ONCE SKIES CLEARED ON THE 18TH...CONDITIONS WERE FAVORABLE FOR A COUPLE OF FROSTY NIGHTS ACROSS THE REGION. EARLY MORNING LOWS ON THE 19TH AND 20TH WERE NEAR FREEZING ACROSS MOST INLAND AREAS. SOME OF THE COLDEST INLAND VALLEYS SAW TEMPERATURES DIP INTO THE UPPER 20S. A FEW DAILY RECORD LOW TEMPERATURES WERE SET OR TIED ON THE 19TH.

A DEEP AND WET UPPER LEVEL TROUGH DEVELOPED OFFSHORE BY DECEMBER 20. THIS WEATHER SYSTEM BEGAN TO SPREAD RAIN ACROSS THE AREA ON THE FIRST DAY OF WINTER...DECEMBER 21ST. INITIALLY ALL OF THE HEAVIER RAINFALL WAS CONFINED TO THE NORTH BAY. AS MUCH AS 6 INCHES OF RAIN FELL IN NORTHWEST SONOMA COUNTY ON THE 21ST...BUT RAIN AMOUNTS FARTHER TO THE SOUTH SIGNIFICANTLY LIGHTER. MOST AREAS SOUTH OF THE GOLDEN GATE PICKED UP LESS THAN A HALF INCH OF RAIN ON THE 21ST. LATE ON THE NIGHT OF THE 21ST A ROBUST COLD FRONT BEGAN TO APPROACH THE REGION. THIS COLD FRONT PRODUCED A LINE OF INTENSE SHOWERS AND ISOLATED THUNDERSTORMS THAT RUMBLED THROUGH THE SAN FRANCISCO BAY AREA DURING THE PRE-DAWN HOURS OF SATURDAY DECEMBER 22ND. THESE SHOWERS AND ISOLATED THUNDERSTORMS THEN MOVED THROUGH THE MONTEREY BAY AREA AROUND SUNRISE THAT MORNING. ONE THUNDERSTORM GENERATED A WATERSPOUT AND WEAK TORNADO. AT 7 AM PST THAT MORNING A WEAK WATERSPOUT FORMED OVER MONTEREY BAY. SHORTLY THEREAFTER A TORNADO MOVED INLAND ALONG THE SOUTHERN SANTA CRUZ COUNTY COAST NEAR WATSONVILLE. DAMAGE SURVEY RESULTS CONCLUDED THAT THE DAMAGE FROM THE TORNADO WAS CONSISTENT WITH A TORNADO OF EF-0 INTENSITY...WITH WINDS ESTIMATED AT ABOUT 75 MPH. THE TORNADO PRODUCED TREE DAMAGE...ALONG WITH MODERATE TO SIGNIFICANT DAMAGE TO SEVERAL COMMERCIAL GREENHOUSES ON A LARGE FARM ABOUT A QUARTER OF A MILE INLAND FROM MONTEREY BAY. FROM A COMBINATION OF RADAR DATA...DAMAGE SURVEY ASSESSMENT AND WITNESS STATEMENTS...IT WAS CONCLUDED THAT THE TORNADO TOOK AN INTERMITTENT PATH ABOUT 1 MILE LONG AND ABOUT 20 YARDS WIDE.

RAINFALL TAPERED OFF SATURDAY AFTERNOON AND SATURDAY NIGHT BUT THEN ONE FINAL FRONTAL RAIN BAND MOVED ACROSS THE REGION ON SUNDAY THE 23RD...PRODUCING A PERIOD OF HEAVY RAIN THAT AFTERNOON. BECAUSE THE SOIL HAD BEEN SATURATED BY RECENT SUBSTANTIAL RAINFALL...RUNOFF ON THE 23RD WAS HEAVY AND RESULTED IN RAPID RISES ON AREA RIVERS AND CREEKS. THE NAPA RIVER NEAR SAINT HELENA CRESTED ONE FOOT ABOVE FLOOD STAGE AT ABOUT 7 PM SUNDAY EVENING. SIGNIFICANT RISES ALSO OCCURRED ON THE LOWER NAPA RIVER AND THE RUSSIAN RIVER...BUT FOR THE MOST PART THESE NORTH BAY MAINSTEM RIVERS REMAIN WITHIN THEIR BANKS.

THE SAN LORENZO RIVER NEAR FELTON IN THE SANTA CRUZ MOUNTAINS

ROSE ONE AND A HALF FEET ABOVE FLOOD STAGE EARLY ON THE EVENING OF THE 23RD. 50 HOMES WERE EVACUATED IN THE FELTON GROVE AREA BUT ONLY MINOR FLOODING OCCURRED. THE SAN FRANCISQUITO CREEK SPILLED LOCALLY OUT OF ITS BANKS AROUND 7 PM THAT EVENING...FLOODING A PORTION OF HIGHWAY 101 NORTH OF EMBARCADERO ROAD IN PALO ALTO. OTHER SMALL STREAMS AND CREEKS THAT REACHED BANKFULL ON THE AFTERNOON OR EVENING OF THE 23RD INCLUDED THE PETALUMA RIVER IN SONOMA COUNTY...THE PESCADERO CREEK IN SAN MATEO COUNTY...AND BOTH THE SOQUEL AND CORRALITOS CREEKS IN SANTA CRUZ COUNTIES. ALTHOUGH THESE SMALL STREAMS AND CREEKS REACHED OFFICIAL FLOOD STAGE...THEY MOSTLY REMAINED IN THEIR BANKS AND NO SIGNIFICANT FLOODING WAS REPORTED.

ANOTHER STORM SYSTEM SWEEPED ACROSS THE REGION FROM THE NORTHWEST ON CHRISTMAS DAY. THIS STORM DID NOT CONTAIN AS MUCH MOISTURE AS THOSE OF THE PREVIOUS WEEKEND...AND SO RAINFALL WAS MOSTLY LIGHT TO MODERATE IN INTENSITY.

ONE MORE WEATHER SYSTEM BROUGHT LIGHT AMOUNTS OF RAIN TO THE REGION LATE ON THE 28TH AND EARLY ON THE 29TH. AFTER THAT SYSTEM MOVED THROUGH...A COOL AIRMASS SETTLED ACROSS THE REGION...PRODUCING A COUPLE OF FROSTY NIGHTS AT THE END OF 2012.

AVERAGE TEMPERATURES FOR DECEMBER WERE CLOSE TO NORMAL. HIGH TEMPERATURES AVERAGED NEAR NORMAL IN THE SAN FRANCISCO BAY AREA BUT WERE A FEW DEGREES BELOW NORMAL IN THE MONTEREY BAY AREA. AVERAGE DECEMBER LOW TEMPERATURES WERE ABOVE NORMAL AT NEARLY ALL CLIMATE STATIONS...PROBABLY DUE TO CONSIDERABLE CLOUD COVER DURING THE MONTH.

RAIN TOTALS FOR THE MONTH WERE WELL ABOVE NORMAL. MOST CLIMATE STATIONS HAD MONTHLY RAIN TOTALS THAT WERE FROM 150 TO 200 PERCENT OF THE DECEMBER 30-YEAR AVERAGE. SEVERAL CLIMATE STATIONS ACCUMULATED MORE THAN DOUBLE THEIR DECEMBER AVERAGE PRECIPITATION INCLUDING BEN LOMOND...GILROY...MOUNT DIABLO JUNCTION...NEWARK AND HOLLISTER.

AFTER MUCH ABOVE NORMAL RAINFALL IN BOTH NOVEMBER AND DECEMBER...YEAR-TO-DATE RAINFALL TOTALS FROM JULY 1 TO DECEMBER 31 WERE ABOUT 150 PERCENT OF NORMAL ACROSS THE REGION.

...DECEMBER REGIONAL TEMPERATURE SUMMARY...

LOCATION	DEPARTURE			DEPARTURE		
	AVG	NORMAL	FROM	AVG	NORMAL	FROM
	HIGH	HIGH	NORMAL	LOW	LOW	NORMAL
NORTH BAY...						
ANGWIN	50.5	52.8	-2.3	37.9	38.9	-1.0
CLOVERDALE	57.0	57.2	-0.2	39.0	38.6	0.4
KENTFIELD	55.8	54.8	1.0	42.2	41.3	0.9
NAPA	57.9	57.1	0.8	40.6	39.6	1.0

NAPA AIRPORT	56.9	55.6	1.3	37.7	36.0	1.7
PETALUMA AIRPORT	56.9	57.0	-0.1	38.4	38.5	-0.1
SAINT HELENA	56.6	57.4	-0.8	40.4	38.1	2.3
SAN RAFAEL	56.5	54.3	2.2	42.0	41.8	0.2
SANTA ROSA AP	56.5	56.3	0.2	37.9	36.5	1.4
SONOMA	55.8	56.2	-0.4	38.2	37.6	0.6

SAN FRANCISCO PENINSULA...

HALF MOON BAY	58.0	59.0	-1.0	43.5	41.9	1.6
REDWOOD CITY	58.0	58.1	-0.1	41.7	40.3	1.4
SAN FRANCISCO AIRPORT	57.4	56.6	0.8	46.3	44.6	1.7
SAN FRANCISCO DOWNTOWN	56.5	57.1	-0.6	47.7	46.1	1.6
WOODSIDE	61.9	60.3	1.6	37.2	36.4	0.8

EAST BAY...

BERKELEY	57.1	58.6	-1.5	43.3	42.6	0.7
CONCORD AIRPORT	55.8	55.6	0.2	40.0	39.8	0.2
FREMONT	57.8	57.8	0.0	43.5	42.5	1.0
HAYWARD AIRPORT	57.8	57.5	0.3	43.4	42.6	0.8
LIVERMORE	56.4	56.4	0.0	39.8	39.1	0.7
LIVERMORE AP	57.1	56.2	0.9	39.3	37.7	1.6
MARTINEZ	56.1	55.6	0.5	38.6	35.5	3.1
MOUNT DIABLO JUNCTION	50.5	55.2	-4.7	40.0	39.8	0.2
NEWARK	56.9	58.0	-1.1	42.4	42.3	0.1
OAKLAND	59.5	58.3	1.2	45.0	44.7	0.3
OAKLAND AIRPORT	59.3	56.4	2.9	44.4	41.5	2.9
RICHMOND	56.6	57.7	-1.1	44.2	43.6	0.6

SOUTH BAY AND SANTA CRUZ COUNTY...

BEN LOMOND	61.1	60.5	0.6	40.2	36.5	3.7
GILROY	58.9	60.5	-1.6	39.3	37.4	1.9
LOS GATOS	56.1	57.2	-1.1	39.5	39.1	0.4
MOFFETT FIELD	57.8	58.9	-1.1	43.6	42.9	0.7
MOUNT HAMILTON	45.1	48.1	-3.0	35.2	37.8	-2.6
SAN JOSE	58.2	58.0	0.2	43.2	41.9	1.3
SANTA CRUZ	57.4	61.9	-4.5	41.8	41.2	0.6
WATSONVILLE	59.4	60.8	-1.4	40.4	39.4	1.0
WATSONVILLE AP	57.4	60.0	-2.6	40.8	39.7	1.1

MONTEREY AND SAN BENITO COUNTIES...

CARMEL VALLEY	59.1	61.6	-2.5	40.9	38.6	2.3
HOLLISTER	56.6	59.9	-3.3	40.8	37.7	3.1
KING CITY	59.2	62.6	-3.4	40.5	36.9	3.6
MONTEREY	57.0	57.8	-0.8	45.0	43.8	1.2
MONTEREY AIRPORT	58.5	60.5	-2.0	43.3	42.3	1.0
SALINAS	59.2	62.3	-3.1	41.6	39.6	2.0
SALINAS AIRPORT	58.2	61.1	-2.9	42.2	40.8	1.4

...DECEMBER REGIONAL PRECIPITATION SUMMARY...

LOCATION	DEC TOTAL	NORMAL DEC PRECIP	PERCENT OF NORMAL
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NORTH BAY...

ANGWIN	13.54	8.09	167
CLOVERDALE	13.57	8.45	161
KENTFIELD	15.85	9.91	160
MUIR WOODS	11.47	7.40	155
NAPA	7.87	5.23	150
OCCIDENTAL	15.50	11.57	134
PETALUMA AIRPORT	7.01	4.94	142
SAINT HELENA	11.68	7.12	164
SAN RAFAEL	12.95	7.59	171
SONOMA COUNTY AP	11.73	7.03	167

SAN FRANCISCO PENINSULA...

HALF MOON BAY	7.68	5.28	145
PALO ALTO	5.87	2.95	199
REDWOOD CITY	6.40	3.84	167
SAN FRANCISCO AIRPORT	6.24	4.03	155
SAN FRANCISCO DOWNTOWN	7.11	4.56	156

EAST BAY...

BERKELEY	8.81	5.04	175
CONCORD AIRPORT	5.08	3.14	162
FREMONT	5.39	2.82	191
LIVERMORE	4.22	2.58	164
LIVERMORE AIRPORT	4.29	2.68	160
MARTINEZ	6.51	3.71	175
MOUNT DIABLO JUNCTION	10.08	4.39	230
NEWARK	6.03	2.56	236
OAKLAND	7.06	4.48	158
OAKLAND AIRPORT	5.82	3.66	159
RICHMOND	8.51	4.61	185

SOUTH BAY AND SANTA CRUZ COUNTY...

BEN LOMOND	20.27	9.88	205
GILROY	10.10	3.70	273
MOFFETT FIELD	4.28	2.56	167
MOUNT HAMILTON	7.80	4.15	188
SAN JOSE	4.24	2.61	162
SANTA CRUZ	7.95	5.68	140
WATSONVILLE	7.89	4.25	186

WATSONVILLE AP	6.03	4.20	144
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MONTEREY AND SAN BENITO COUNTIES...

CARMEL VALLEY	4.87	3.01	162
HOLLISTER	6.11	2.13	287
KING CITY	2.75	1.98	139
MONTEREY	5.14	3.41	151
MONTEREY AIRPORT	4.06	2.34	174
SALINAS	3.97	2.44	163
SALINAS AIRPORT	3.32	1.93	172

...DAILY TEMPERATURE RECORDS FOR DECEMBER 2012...

		RECORD MAXIMUM TEMP	PREVIOUS RECORD
12/09	OAKLAND AIRPORT	66	65 IN 1976
12/09	KENTFIELD	70	70 IN 1936
12/10	OAKLAND MUSEUM	72	68 IN 2005
12/10	OAKLAND AIRPORT	71	71 IN 1958
12/10	MOFFETT FIELD	69	69 IN 1958

		RECORD MINIMUM TEMP	PREVIOUS RECORD
12/19	OAKLAND AIRPORT	34	34 IN 2006
12/19	SAN RAFAEL	32	32 IN 1992
12/19	SALINAS	30	31 IN 2006

...MONTHLY RANKS FOR DOWNTOWN SAN FRANCISCO...

AVERAGE HIGH TEMPERATURE....56.5....52ND COOLEST OUT OF 138 YEARS
AVERAGE LOW TEMPERATURE.....47.7....42ND WARMEST OUT OF 138 YEARS
PRECIPITATION..... 7.11 IN....28TH WETTEST OUT OF 162 YEARS

...MONTHLY EXTREMES FOR SELECT LOCATIONS...

LOCATION	WARMEST DAY(S)	COOLEST DAY(S)	WETTEST DAY(S)
SANTA ROSA AIRPORT	12/09 69 DEG	12/19 26 DEG	12/21 2.55 INCHES
SAN FRANCISCO	12/09 66 DEG	12/19 40 DEG	12/25 1.15 INCHES
LIVERMORE AIRPORT	12/10 67 DEG	12/19 12/20 29 DEG	12/02 1.24 INCHES
SAN JOSE	12/05 69 DEG	12/19 32 DEG	12/23 1.17 INCH
SALINAS AIRPORT	12/09 69 DEG	12/19 32 DEG	12/23 0.66 INCH

NOTE: THIS CLIMATOLOGICAL DATA IS PRELIMINARY. FOR OFFICIAL
 CERTIFIED CLIMATOLOGICAL DATA PLEASE CONTACT THE NATIONAL
 CLIMATIC DATA CENTER AT 828-271-4800 OR <http://www.ncdc.noaa.gov>.
 OFFICIAL VALUES AS DETERMINED AT THE ABOVE WEB SITE MAY TAKE
 SEVERAL MONTHS FOR AUTHENTICATION AND PUBLICATION.

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DYKEMA