SUMMARY of the NOVEMBER 1996 WEATHER ON THE MONTEREY PENINSULA

General: Temperatures in November 1996 averaged slightly below normal while rainfall was moderate. The number of fog days was nearly twice the normal expectation while winds were in excess of seasonal values.

Temperature: Overall, November 1996 temperatures were slightly below normal (56.0°F vs. 56.3°F). In contrast to October 1996 with relatively warm days and cool nights, November 1996 days were anomalously cool (64.0°F vs. 65.4°F) while nights were milder than expectation (48.0°F vs. 47.1°F). Temperatures reached 80°F on both 8 and 9 November while the month's low, 41°F, was observed on the last day in November. Frost was not observed at the National Weather Service Climate Station, but lower elevations on the Monterey Peninsula and local valleys experienced several days with frost (see summary of temperatures for other local stations on the last page). Several daily maximum /minimum temperature records were tied or set:

- Minimum - cold - 42°F low on 6 November is new record (44°F in 1989 previously)
- warm - 55°F low on 17 November tied warm minimum for date, set in 1982
  54°F low on 21 November is new record warm minimum for date (Was 53°F in 1974)

Maximum - cold - 54°F maximum on 3 November is new record for date; previously 58°F in 1994

Precipitation: Although there is more expectation for "dry" than "wet" this rain year, November's rainfall, like that of the month before it, exceeded normal: 2.63" vs. 2.27" normal. In October it was 1.0" vs. .78". Both October and November rainfall above normal has not occurred since 1985, with 1.61" in October and 4.43" in November that year. (Incidentally, rainfall in the 1985/86 rain year exceeded normal: 20.46" vs. 18.95".)

November 1996 was dry until rain began on the 16th. Before the series of storms ended on the 23rd, 2.60" fell, to include 1.67" in the 24-hour period to 6 PM on the 17th. This rainfall figure is a record for the most rainfall in any 24-hour observation period starting from the beginning of the rain year through the 17th of November. The nearest competitor was 1.64" in the 24-hour period ending at 6 PM on 16 November 1965. The wet series of storms was unusual in that sub-tropical moisture arrived at the Central Coast the "hard way" -- first moving north to the Gulf of Alaska area from the Hawaiian area, then moving south/southeast to the Central and south Coast areas of California. Rainfall in excess of 10" occurred in this wet period over sections of the Santa Lucia Mountains in South Monterey County. For example, Big Sur already reported 8.05" by late afternoon on 17 November, near the beginning of the wet period.

The rain-year total at month's end stands at 3.81". Normal is 3.51". Recall that last year the rain year total was only 0.30" on 30 November -- yet the rain year ended with a well-above-normal amount of 20.94".

Thunder was recorded late morning on 21 November, giving this station the first thunderstorm day since 21 February this year. So far this calendar year there have been four thunderstorm days (three in February 1996). Normal is five. Highest thunderstorm-day frequency is usually in the period January through March.
Wind: The average wind (6 AM to 11 PM) at the Monterey Peninsula Airport was 7.0 miles per hour (mph) in November 1996, which is 1.4 mph above the recent five-year average.

Fog: November's fog-day frequency of 15 days almost doubled the November norm of 8 days. In fact, 15 is the highest November frequency in at least 33 years, along with November 1967 and 1991. The high frequency was, in part, due to fog accompanying prolonged periods of rain and light southerly winds on 16, 17, 21 and 22 November. With 171 fog days already in 1996, an excessively foggy year is assured since the 32-year average is only 149 fog days.

90-Day Temperature and Precipitation Outlook for the Central Coast: The National Weather Service 90-day outlook for December through February indicates the climate normal is the best forecast for temperature, except above normal is indicated late in the 90-day period. For rainfall, near normal is the best forecast, especially due to the absence of any strong indications of above or below normal rainfall.

Following are the normals for the National Weather Service Climate Station (45-year data base).

<table>
<thead>
<tr>
<th>Rainfall</th>
<th>Normal Max/Min Temps (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2.94&quot;</td>
<td>December 60.8/43.6</td>
</tr>
<tr>
<td>January 4.04&quot;</td>
<td>January 60.1/43.3</td>
</tr>
<tr>
<td>February 3.03&quot;</td>
<td>February 61.8/44.7</td>
</tr>
</tbody>
</table>

Comparative Weather Data
for Stations on/near the Monterey Peninsula and Salinas
November 1996

Following are comparative figures from seven local observation sites: 1) the National Weather Service Climate Station (NWSCS), (elevation 385') located in the western hilly section of Monterey; 2) the National Weather Service Forecast Office (NWSFO) site (elevation 122'), located in the flat area of eastern Monterey, on the NPS Annex grounds adjacent to Airport; 3) the Naval Postgraduate School Campus (NPS), Monterey; 4) the Ft. Ord site (Pt. Ord (NPS)) (elevation 167') located just northwest of the Marina Municipal Airport (formerly Fritzschie Field). This is the site of the Naval Postgraduate School's wind profiler (managed by Department of Meteorology); 5) Site SE end of Marina, located about 2 1/2 miles ESE of Monterey Bay (elevation 80'); 6) Carmel Valley site (CV) near Village (elevation 500'); south facing slope; 7) SW Salinas (SAL) vicinity of W. Blanco Rd. within 1/2 mile of S. Main St.

<table>
<thead>
<tr>
<th>Location</th>
<th>Temperature (F)</th>
<th>Precipitation (inches)</th>
<th>Wind (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Max.</td>
<td>Avg. Highest</td>
<td>Avg. Lowest</td>
<td>Nov this rain yr &quot;Norm&quot;</td>
</tr>
<tr>
<td>Avg. (1 Jul-30 Nov)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) NWSCS:</td>
<td>64.0</td>
<td>60^</td>
<td>48.0</td>
</tr>
<tr>
<td>2) NWSFO:</td>
<td>66.2</td>
<td>86</td>
<td>46.1</td>
</tr>
<tr>
<td>3) NPS:</td>
<td>62.8</td>
<td>81</td>
<td>46.2</td>
</tr>
<tr>
<td>4) Ft. Ord (NPS):</td>
<td>63.2</td>
<td>81</td>
<td>42.7</td>
</tr>
</tbody>
</table>
5) Marina:
   63.3  79    44.8 34^  e  2.16  3.15  1.87&  --  --

6) CV:
   67.9  84    43.8 34^  f  3.08  3.97  3.08#  --  --

7) SAL:
   67.2  83    43.8 35    g  3.29  3.92  1.77%  --  --

FOOTNOTES:
   observations for precipitation:
   a,e = 6 PM     b,d = midnight  c = 4 PM  f, g = 8 AM
   (NOTE: for f, g: 24-h rainfall measured 8 AM, first day of the month
   counts for previous month)
   *= average hourly Airport winds in period 6 AM to 11 PM.
   @ = 45-year average      # = 39-year average      % = 10-year average
   & = 14-year average      ^= on 2 days

NWS Climate Station, Monterey CA

November 1996

Temperature (degree F) vs Precipitation (inches)

Total = 2.63    Average = 48.0    Average = 64.0