November 2016 Temperature and Precipitation Summary

November 1st – 16th: November began with a dry low pressure system moving across the southwest. The 1st and 2nd were dry, with unseasonably warm temperatures into the 3rd. By the 3rd, moisture from Mexico had moved into Arizona and widespread rain fell across the eastern half of the state. The three day totals included 1.20” at Show Low, 0.25” at Prescott, 0.15” at Phantom Ranch, 0.42” at Petrified Forest, 1.02” at Apache Junction, 0.22” at East Mesa, 0.30” at Douglas, 0.33” at Carefree, 0.42” at Canyon de Chelly, 0.70” at Alpine, 0.61” at Winslow, 0.62” at Window Rock, 0.41” at Tucson, 0.18” at Scottsdale, 1.06” at Saint Johns, 1.16” at Safford, 0.35” at Phoenix Airport, 0.11” at Flagstaff, and 0.20” at Bisbee-Douglas. By the 6th, high pressure returned and daytime temperatures rose back to above normal values. Warm and dry conditions continued through the 16th under the strong high pressure ridge. The southwest deserts saw highs in the 90s and nights in the 60s and low 70s. The higher elevations had daytime temperatures in the upper 50s and low 60s, with nighttime cooling into the teens with the clear skies.

November 17th – 30th: On the 17th the first of a series of low pressure systems moved across the northwest, digging down into Utah and Colorado, but staying north of Arizona. This first system brought a 10 degree drop in daytime temperatures, but only Navajo National Monument received any rainfall (0.21”). The second low pressure system passed through the state from the 20th through the 22nd. It brought widespread rainfall and some light snow to Bellemont (0.4”), and Williams (0.1”). The high elevation mountains received much more snow. Rain totals for the storm included 0.60” at Youngtown, 1.22” at Show Low, 0.55” at Seligman, 0.76” at Prescott, 0.60” at Payson, 0.15” at Petrified Forest, 0.19” at Apache Junction, 0.92” at Cottonwood, 0.56” at Carefree, 0.15” at Canyon de Chelly, 0.12” at Bouse, 0.80” at Bellemont, 0.01” at Yuma, 0.32” at Window Rock, 0.67” at Valle, 0.01” at Tucson, 0.11” at Sedona, 0.20” at Scottsdale, 0.09 at Safford, 0.11” at Phoenix Airport, 0.28” at Kingman, and 0.61” at Grand Canyon Airport. High pressure returned by the 23rd and daytime temperatures rebounded back into the upper 70s and lower 80s in the southwest deserts, and upper 40s and lower 50s at the higher elevations of northern and eastern Arizona. The third low pressure system moved into the state on the 27th and lingered in northern Arizona until the 29th. This was the coldest system, bringing significant snowfall to the highest elevations. Snow totals included 1.7” at Flagstaff, 5.0” at Bellemont and Williams, 2.0” at Show Low and 0.3” at Prescott. Rain totals included 0.23” at Youngtown, 0.22” at Phoenix Airport, 0.26” at Phoenix Deer Valley Airport, 0.08” at Yuma, 0.31” at Bouse, 0.10” at David Monthan AFB, 0.37” at Grand Canyon Airport, 0.15” at Kingman, 0.36” at Scottsdale, 0.07” at Safford, 0.08” at Tucson Airport, 0.18” at Coronado National Monument, 0.16” at Cottonwood, 0.28” at East Mesa, 0.15” at Eloy, and 0.29” at Payson. The coldest temperature reported for the month was -5°F at Grand Canyon Airport on the 29th and at Bellemont on the 30th.

In This Issue: Overview of November, graphs of the November daily maximum and minimum temperatures, precipitation, mean daily dew points for Flagstaff, Phoenix, and Tucson; November climate statistics, maps of mean monthly maximum and minimum temperatures, precipitation, dew points, wind speeds for November; and graphs of the mean November temperature and precipitation for the period of record for Tucson, Phoenix, and Flagstaff, graphs of the cumulative precipitation for the calendar year for Flagstaff, Phoenix, and Tucson. Climate calendars for Flagstaff, Phoenix, Tucson, Prescott, Winslow and Yuma, including daily and monthly normals and extremes, for each month of the year, can be downloaded directly from the State Climate website. See p.19 of this report for calendar abbreviations.

Data are preliminary and are from the National Weather Service Forecast Offices in Flagstaff, Phoenix and Tucson.

**Note:** The discrepancy between the Statewide Temperature and Precipitation values for Phoenix, Flagstaff and Tucson and the daily values in their graphs are due to the reporting times. Statewide Temperature and Precipitation values are taken at 5pm, while official daily records at the airports are taken from Midnight to Midnight.
November 2016 Daily Temperature, Precipitation, & Dew Point for Flagstaff, Phoenix, and Tucson
This November had no significant ranking for temperature or precipitation.

Avg Max Temp (F)  52.9  Normal  50.5  
Avg Min Temp (F)  24.3  Normal  22.9  
Avg Mean Temp (F)  38.6  Normal  36.7  
Departure from Normal (F)  +1.9

Highest Monthly Avg Temp (F)  44.9 in 1949  
Lowest Monthly Avg Temp (F)  29.6 in 1972

Highest Temp this month (F): 72 on 15th  
Lowest Temp this month (F): 2 on 30th

Record Low (F): -13 on 11/18/1958

Temperature or precipitation records this month:
3rd – HiMin 41 tied, first set in 1987
4th – HiMin 42 set, previous record 40 in 2001
15th HiMax 72 set, previous record 70 in 1999

Flagstaff Number of Days of:
Minimum Temp 33°F or higher  4  
Minimum Temp 20°F or lower  9  
Maximum Temp 60°F or higher  8  
Maximum Temp 40°F or lower  4

Heating Degree Days  783  Normal  849  
Cooling Degree Days  0  Normal  0  
Degree base 65°F

Total November Precipitation 1.98”  
Normal November Precipitation 1.76”  
Departure from normal +0.22”

Greatest 24-Hr Precipitation 1.37” on 11/20-21
Total Precipitation Year-to-Date 21.38”  
Departure from Normal +1.34”

Total November Snowfall 5.5”  Normal 10.7”
Record November Snowfall 42.6”  1902

Number of Days:
Clear  23
Partly Cloudy  5
Cloudy  2

Greatest November Precipitation 7.10” in 1905
Least November Precipitation: 0.00” in 1999, 1903, and 6 other years.

Average Wind Speed 6.7 mph
Highest Peak Gust 46 mph from 200° on 26th

PHOENIX CLIMATE STATISTICS
November 2016

This November was the 6th warmest and had no significant ranking for precipitation.

Avg Max Temp(F)  77.9  Normal  75.5  
Avg Min Temp(F)  56.5  Normal  52.7  
Avg Mean Temp(F)  67.2  Normal  64.1  
Departure from Normal (F)  +3.1

Highest Monthly Avg Temp (F)  70.0 in 2007  
Lowest Monthly Avg Temp (F)  55.0 in 1922

Highest Temp this month (F)  90 on 8th  
Lowest Temp this month (F): 41 on 30th

Record High (F): 96 on 11/1 & 2/1924, 11/3/2009  
Record Low (F): 27 on 11/23/1931

Temperature or precipitation records this month:
3rd – Precip 0.35” set, previous record 0.01” in 1957
9th – HiMin 68 set, previous record 67 in 1991

Phoenix Number of Days of:
Minimum Temp 50°F or lower 7  
Minimum Temp 60°F or higher 13  
Maximum Temp 70°F or lower 5  
Maximum Temp 80°F or higher 16

Heating Degree Days  58  Normal  97  
Cooling Degree Days  133  Normal  70  
Degree base 65°F

Total November Precipitation 0.68”
Normal November Precipitation 0.65”
Departure from normal +0.03”
Greatest 24-Hr Precipitation 0.35” on 3rd
Total Precipitation Year-to-Date 5.24”
Departure from Normal -1.91”

Greatest November Precipitation 3.61” in 1905
Least November Precipitation 0.00” in 2014, 2005, and 1999 and 22 other years.

TUCSON CLIMATE STATISTICS
November 2016

This November was the 6th warmest on record and had no significant ranking for precipitation.

Avg Max Temp(F)  77.3  Normal  73.5
Avg Min Temp(F)  50.7  Normal  46.1
Avg Mean Temp(F)  64.0  Normal  59.8
Departure from Normal (F) +4.2

Highest Monthly Avg Temp (F)  65.7  in 2007
Lowest Monthly Avg Temp (F)  50.9  in 1911

Highest Temp this month (F):  89 on 15th
Lowest Temp this month (F):  29 on 30th

Record High (F):  93 on 11/03/2009, 11/6/1999, 11/6/1934
Record Low (F):  19 on 11/19/1921

Temperature and precipitation records this month:
15th HiMax 89 tied, first set in 1999
21st HiMin 57 set, previous record 55 in 2008

Tucson Number of Days of:
Minimum Temp 40°F or lower 3
Minimum Temp 55°F or higher 10
Maximum Temp 70°F or higher 5
Maximum Temp 80°F or higher 13

Number of Days:
Clear 17
Partly Cloudy 11
Cloudy 2

Heating Degree Days 94  Normal  184
Cooling Degree Days 70  Normal  27
Degree base 65°F

Total November Precipitation 0.50”
Normal November Precipitation 0.57”
Departure from normal -0.07”
Greatest 24-Hr Precipitation 0.41” on 2nd
Total Precipitation Year-to-Date 10.73”
Departure from Normal +0.07”

Greatest November Precipitation 4.61” in 1905
Least November Precipitation:  0.00” in 1894, 2014, and 21 other years.

Number of Days:
Clear 22
Partly Cloudy 2
Cloudy 0

Average Wind Speed 8.3 mph
Highest Peak Gust 44 mph from 130° on 9th

Data are from the National Weather Service and the National Climatic Data Center and are preliminary.
**Wind Speeds for November:**

<table>
<thead>
<tr>
<th>Day</th>
<th>Phoenix Avg (mph)</th>
<th>Phoenix Max</th>
<th>Flagstaff Avg</th>
<th>Flagstaff Max</th>
<th>Tucson Avg</th>
<th>Tucson Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.2</td>
<td>17</td>
<td>11</td>
<td>35</td>
<td>4.2</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>4.7</td>
<td>19</td>
<td>10.2</td>
<td>31</td>
<td>5.2</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>12.2</td>
<td>49</td>
<td>11.5</td>
<td>32</td>
<td>8.4</td>
<td>35</td>
</tr>
<tr>
<td>4</td>
<td>4.3</td>
<td>15</td>
<td>9.6</td>
<td>23</td>
<td>5.2</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>3.6</td>
<td>12</td>
<td>3.8</td>
<td>21</td>
<td>5.1</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>13</td>
<td>3.6</td>
<td>23</td>
<td>6.9</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>3.9</td>
<td>12</td>
<td>4.1</td>
<td>20</td>
<td>6.9</td>
<td>19</td>
</tr>
<tr>
<td>8</td>
<td>9.5</td>
<td>28</td>
<td>6.9</td>
<td>21</td>
<td>12.7</td>
<td>42</td>
</tr>
<tr>
<td>9</td>
<td>11.5</td>
<td>28</td>
<td>7</td>
<td>26</td>
<td>17.5</td>
<td>44</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>24</td>
<td>4.8</td>
<td>25</td>
<td>10.7</td>
<td>39</td>
</tr>
<tr>
<td>11</td>
<td>7.5</td>
<td>21</td>
<td>3.1</td>
<td>24</td>
<td>9.6</td>
<td>29</td>
</tr>
<tr>
<td>12</td>
<td>5.6</td>
<td>20</td>
<td>1.6</td>
<td>21</td>
<td>10.6</td>
<td>29</td>
</tr>
<tr>
<td>13</td>
<td>2.7</td>
<td>12</td>
<td>2.5</td>
<td>17</td>
<td>6.5</td>
<td>22</td>
</tr>
<tr>
<td>14</td>
<td>3.6</td>
<td>13</td>
<td>1.8</td>
<td>15</td>
<td>6.3</td>
<td>15</td>
</tr>
<tr>
<td>15</td>
<td>4.5</td>
<td>14</td>
<td>2.9</td>
<td>19</td>
<td>6.2</td>
<td>21</td>
</tr>
<tr>
<td>16</td>
<td>5.7</td>
<td>13</td>
<td>15.3</td>
<td>42</td>
<td>10.3</td>
<td>26</td>
</tr>
<tr>
<td>17</td>
<td>7.9</td>
<td>21</td>
<td>10.6</td>
<td>46</td>
<td>7.5</td>
<td>26</td>
</tr>
<tr>
<td>18</td>
<td>3</td>
<td>17</td>
<td>5.9</td>
<td>27</td>
<td>4.9</td>
<td>18</td>
</tr>
<tr>
<td>19</td>
<td>4.9</td>
<td>20</td>
<td>4.3</td>
<td>24</td>
<td>16.1</td>
<td>33</td>
</tr>
<tr>
<td>20</td>
<td>6</td>
<td>26</td>
<td>7.4</td>
<td>40</td>
<td>9.2</td>
<td>25</td>
</tr>
<tr>
<td>21</td>
<td>7.7</td>
<td>30</td>
<td>13.8</td>
<td>37</td>
<td>8.7</td>
<td>35</td>
</tr>
<tr>
<td>22</td>
<td>3.9</td>
<td>15</td>
<td>3.9</td>
<td>16</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>23</td>
<td>4.8</td>
<td>17</td>
<td>5.2</td>
<td>22</td>
<td>6.5</td>
<td>19</td>
</tr>
<tr>
<td>24</td>
<td>3.3</td>
<td>14</td>
<td>10.4</td>
<td>30</td>
<td>5.8</td>
<td>16</td>
</tr>
<tr>
<td>25</td>
<td>6</td>
<td>22</td>
<td>4.7</td>
<td>13</td>
<td>11.8</td>
<td>29</td>
</tr>
<tr>
<td>26</td>
<td>7.5</td>
<td>31</td>
<td>7.6</td>
<td>46</td>
<td>12.2</td>
<td>30</td>
</tr>
<tr>
<td>27</td>
<td>8.9</td>
<td>50</td>
<td>13.2</td>
<td>45</td>
<td>10.2</td>
<td>35</td>
</tr>
<tr>
<td>28</td>
<td>4.6</td>
<td>17</td>
<td>10</td>
<td>31</td>
<td>5.2</td>
<td>20</td>
</tr>
<tr>
<td>29</td>
<td>6</td>
<td>27</td>
<td>4</td>
<td>20</td>
<td>7.2</td>
<td>23</td>
</tr>
<tr>
<td>30</td>
<td>3.7</td>
<td>15</td>
<td>1.3</td>
<td>15</td>
<td>5.8</td>
<td>19</td>
</tr>
</tbody>
</table>

**Dew Points for November:**

<table>
<thead>
<tr>
<th>Day</th>
<th>Phoenix Phx (°F)</th>
<th>Tucson Tuc</th>
<th>Flagstaff Flg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>37</td>
<td>38</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>44</td>
<td>47</td>
<td>32</td>
</tr>
<tr>
<td>3</td>
<td>51</td>
<td>45</td>
<td>38</td>
</tr>
<tr>
<td>4</td>
<td>55</td>
<td>48</td>
<td>42</td>
</tr>
<tr>
<td>5</td>
<td>53</td>
<td>44</td>
<td>35</td>
</tr>
<tr>
<td>6</td>
<td>52</td>
<td>41</td>
<td>34</td>
</tr>
<tr>
<td>7</td>
<td>46</td>
<td>39</td>
<td>33</td>
</tr>
<tr>
<td>8</td>
<td>40</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td>9</td>
<td>35</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>37</td>
<td>35</td>
<td>24</td>
</tr>
<tr>
<td>11</td>
<td>39</td>
<td>37</td>
<td>24</td>
</tr>
<tr>
<td>12</td>
<td>40</td>
<td>35</td>
<td>22</td>
</tr>
<tr>
<td>13</td>
<td>37</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>14</td>
<td>36</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>15</td>
<td>35</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>16</td>
<td>28</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td>17</td>
<td>21</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>18</td>
<td>22</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>19</td>
<td>28</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>20</td>
<td>47</td>
<td>37</td>
<td>35</td>
</tr>
<tr>
<td>21</td>
<td>48</td>
<td>37</td>
<td>33</td>
</tr>
<tr>
<td>22</td>
<td>43</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>23</td>
<td>36</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>24</td>
<td>27</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>25</td>
<td>29</td>
<td>26</td>
<td>17</td>
</tr>
<tr>
<td>26</td>
<td>34</td>
<td>31</td>
<td>23</td>
</tr>
<tr>
<td>27</td>
<td>42</td>
<td>33</td>
<td>23</td>
</tr>
<tr>
<td>28</td>
<td>35</td>
<td>32</td>
<td>18</td>
</tr>
<tr>
<td>29</td>
<td>29</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>30</td>
<td>27</td>
<td>19</td>
<td>9</td>
</tr>
</tbody>
</table>
The minimum temperatures ranged from -14°F at Mormon Lake to 51°F at Destiny Ranch in southeastern Arizona. The lowest maximum temperature of 58°F was recorded at Snowslide Canyon, while the highest maximum temperature was 96°F at Ehrenburg. The highest rainfall amounts were 5.30” at Snowslide Canyon, and 4.60” at Maverick Fork. The lowest average dew point was 25°F at Page, Show Low and the Grand Canyon and the highest was 45°F at Paloma. The highest peak wind gust was 48 mph at Roll. Average wind speeds ranged from 2 mph at central Phoenix and Payson to 12 mph at Laughlin-Bullhead City.
November 2016

The highest average minimum temperature was 58°F at Yuma, and the lowest average minimum temperature was 18°F at Fort Valley. The highest average maximum temperature was 85°F at Organ Pipe Cactus National Monument and lowest average maximum temperature was 43°F at Snowslide Canyon.
November minimum temperatures were 2 to 4°F warmer than average across most of the state, and 4 to 8°F warmer than normal in Pinal, southern Mohave, southern Gila and western Maricopa counties. Western Pima County was a little cooler than normal. Daytime temperatures were 0 to 4°F warm than average across the entire state, and northern Mohave County was 4 to 6°F warmer than normal. Central and northeastern Arizona was wetter than normal while Santa Cruz, Yuma and southern Mohave counties received less than 50% of normal precipitation.
Calendar Year 2016

Calendar year minimum temperatures have increased to 1 to 3°F warmer than normal across most of the state. The northeastern counties are 0-1°F warmer than normal, while the southeastern counties are 0-2°F cooler than normal. Daytime temperatures are also 1 to 3°F warmer than normal statewide, with slightly cooler conditions in southern Navajo, Graham, and western Pinal counties. Precipitation is above normal in Cochise, eastern Pima, southern Graham, northern Mohave and eastern Coconino counties. Yuma, southern Mohave, Gila, Pinal, central and western Pima, Apache and southern Navajo counties have received less than 80% of normal precipitation.
2017 Water Year

The 2017 Water Year minimum temperatures are still 2 to 6°F warmer than average across most of the state. Daytime temperatures are also 2 to 4°F warmer than average across the state. Southern and western Arizona have had less than 70% of normal precipitation. Much of Navajo County has had over 110% of normal precipitation.
November Mean Temperature Graphs – Flagstaff, Phoenix, and Tucson 1895-2016:

Flagstaff Mean November Temperature (Median 36.9°F)

Phoenix Mean November Temperature (Median 61.5°F)

Tucson Mean November Temperature (Median 58.7°F)
November Mean Precipitation Graphs – Flagstaff, Phoenix, and Tucson 1895-2016

**November Precipitation Flagstaff (Median 1.23 ″)**

**November Precipitation Phoenix (Median 0.36 ″)**

**November Precipitation Tucson (Median 0.48 ″)**
**2016 Cumulative Precipitation Graphs – Flagstaff, Phoenix and Tucson:**

Flagstaff is 1.39” above normal, Tucson is 0.07” above normal, and Phoenix is 1.91” below normal.
The downloadable normals and extremes calendars use the following abbreviations:

NORM = 30 year (1971-2000) average value (degrees Fahrenheit (F))
OBS = The temperature observation for that day this year
AVG = Average daily temperature
HI MAX = Highest maximum temperature for that day (F)
LO MAX = Lowest maximum temperature for that day (F)
LO MIN = Lowest minimum temperature for that day (F)
HI MIN = Highest minimum temperature for that day (F)
Mx PCP = Maximum precipitation for that day (inches)
Mx SNO = Maximum snowfall for that day (inches)