

**NORTH BEND OR**

Latitude = 43.42 N

Longitude = 124.20 W

Period of Record = 1973 to 1996

WMO No. 726917

Elevation = 13 feet

Average Pressure = 30.02 inches Hg

**Design Criteria Data**

|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|--------------------------------------------------|---------------------|----------------------------------|-------------------------|------------------------|-----------------------------|
|                                                  |                     | Wet Bulb Temperature (°F)        | Humidity Ratio (gr/lb)  | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Dry Bulb Temperature (T)</b>                  | <b>(°F)</b>         |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 84                  | 64                               | 54                      | 10.1                   | NW                          |
| 0.4% Occurrence                                  | 71                  | 60                               | 61                      | 14.1                   | NNW                         |
| 1.0% Occurrence                                  | 69                  | 60                               | 61                      | 14.5                   | NNW                         |
| 2.0% Occurrence                                  | 67                  | 59                               | 60                      | 14.8                   | NNW                         |
| Mean Daily Range                                 | 13                  | -                                | -                       | -                      | -                           |
| 97.5% Occurrence                                 | 36                  | 35                               | 27                      | 7.0                    | SE                          |
| 99.0% Occurrence                                 | 33                  | 32                               | 24                      | 6.6                    | SSE                         |
| 99.6% Occurrence                                 | 30                  | 29                               | 19                      | 6.1                    | SSE                         |
| Median of Extreme Lows                           | 25                  | 23                               | 14                      | 7.3                    | SSE                         |
|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|                                                  |                     | Dry Bulb Temperature (°F)        | Humidity Ratio (gr/lb)  | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Wet Bulb Temperature (T<sub>wb</sub>)</b>     | <b>(°F)</b>         |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 66                  | 75                               | 79                      | 10.6                   | W                           |
| 0.4% Occurrence                                  | 62                  | 68                               | 70                      | 12.5                   | NNW                         |
| 1.0% Occurrence                                  | 61                  | 67                               | 68                      | 12.6                   | NNW                         |
| 2.0% Occurrence                                  | 60                  | 65                               | 66                      | 12.5                   | NNW                         |
|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|                                                  |                     | Dry Bulb Temperature (°F)        | Vapor Pressure (in. Hg) | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Humidity Ratio (HR)</b>                       | <b>(gr/lb)</b>      |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 83                  | 66                               | 0.56                    | 8.5                    | W                           |
| 0.4% Occurrence                                  | 75                  | 64                               | 0.50                    | 9.6                    | W                           |
| 1.0% Occurrence                                  | 71                  | 63                               | 0.48                    | 9.4                    | NNW                         |
| 2.0% Occurrence                                  | 69                  | 62                               | 0.47                    | 9.8                    | NNW                         |
| <b>Air Conditioning/<br/>Humid Area Criteria</b> | <b># of Hours</b>   | T ≥ 93°F                         | T ≥ 80°F                | T <sub>wb</sub> ≥ 73°F | T <sub>wb</sub> ≥ 67°F      |
|                                                  |                     | 0                                | 4                       | 0                      | 1                           |

**Other Site Data**

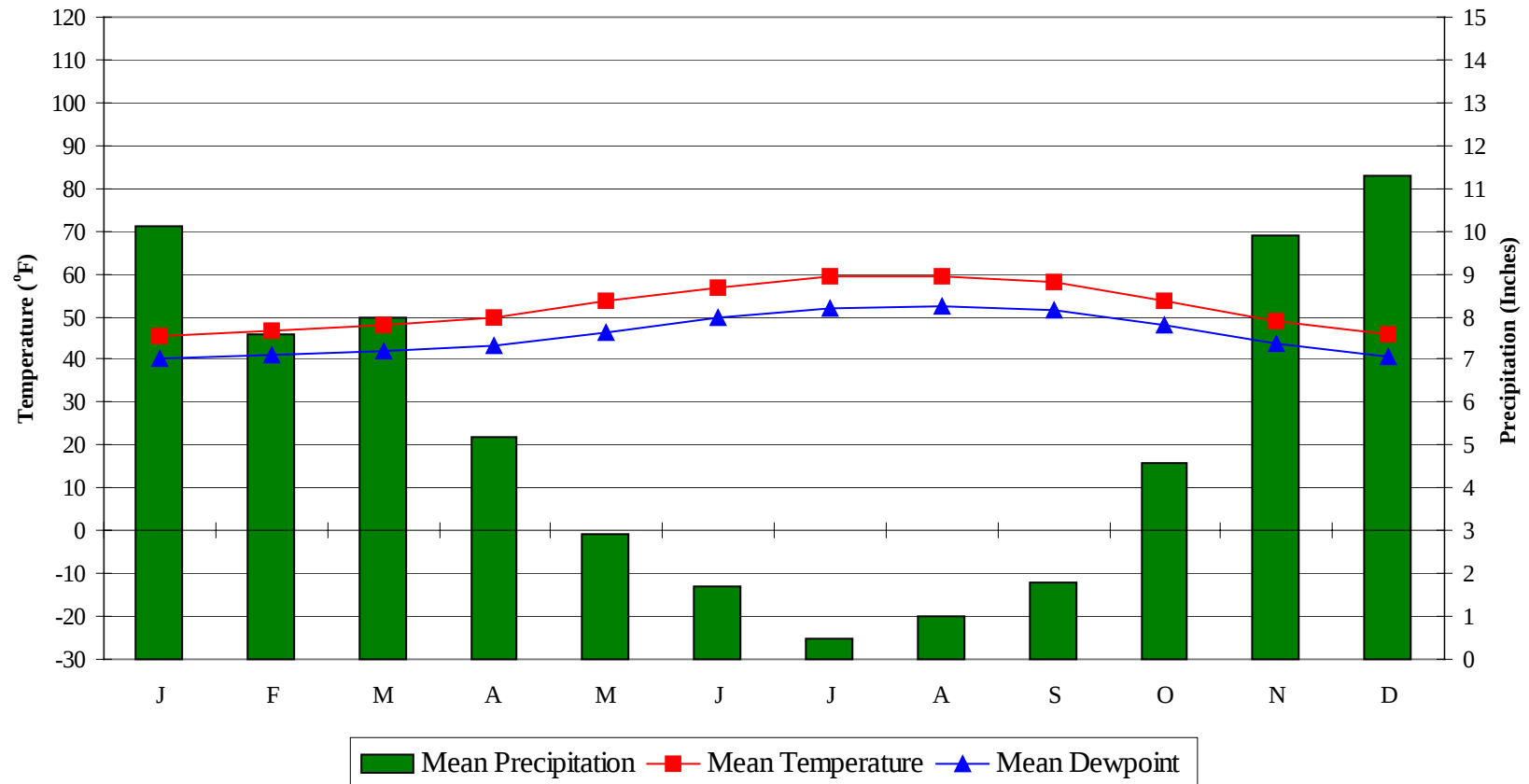
| Weather Region                                   | Rain Rate<br>100 Year Recurrence<br>(in./hr) | Basic Wind Speed<br>3 sec gust @ 33 ft<br>50 Year Recurrence (mph) | Ventilation Cooling Load Index<br>(Ton-hr/cfm/yr) Base 75°F-RH 60%<br>Latent + Sensible |
|--------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 7                                                | 1.5                                          | N/A                                                                | 0.0 + 0.0                                                                               |
| Ground Water Temperature (°F)<br>50 Foot Depth * | Frost Depth<br>50 Year Recurrence<br>(in.)   | Ground Snow Load<br>50 Year Recurrence<br>(lb/ft <sup>2</sup> )    | Average Annual<br>Freeze-Thaw Cycles<br>(#)                                             |
| 54.7                                             | N/A                                          | N/A                                                                | 10                                                                                      |

\*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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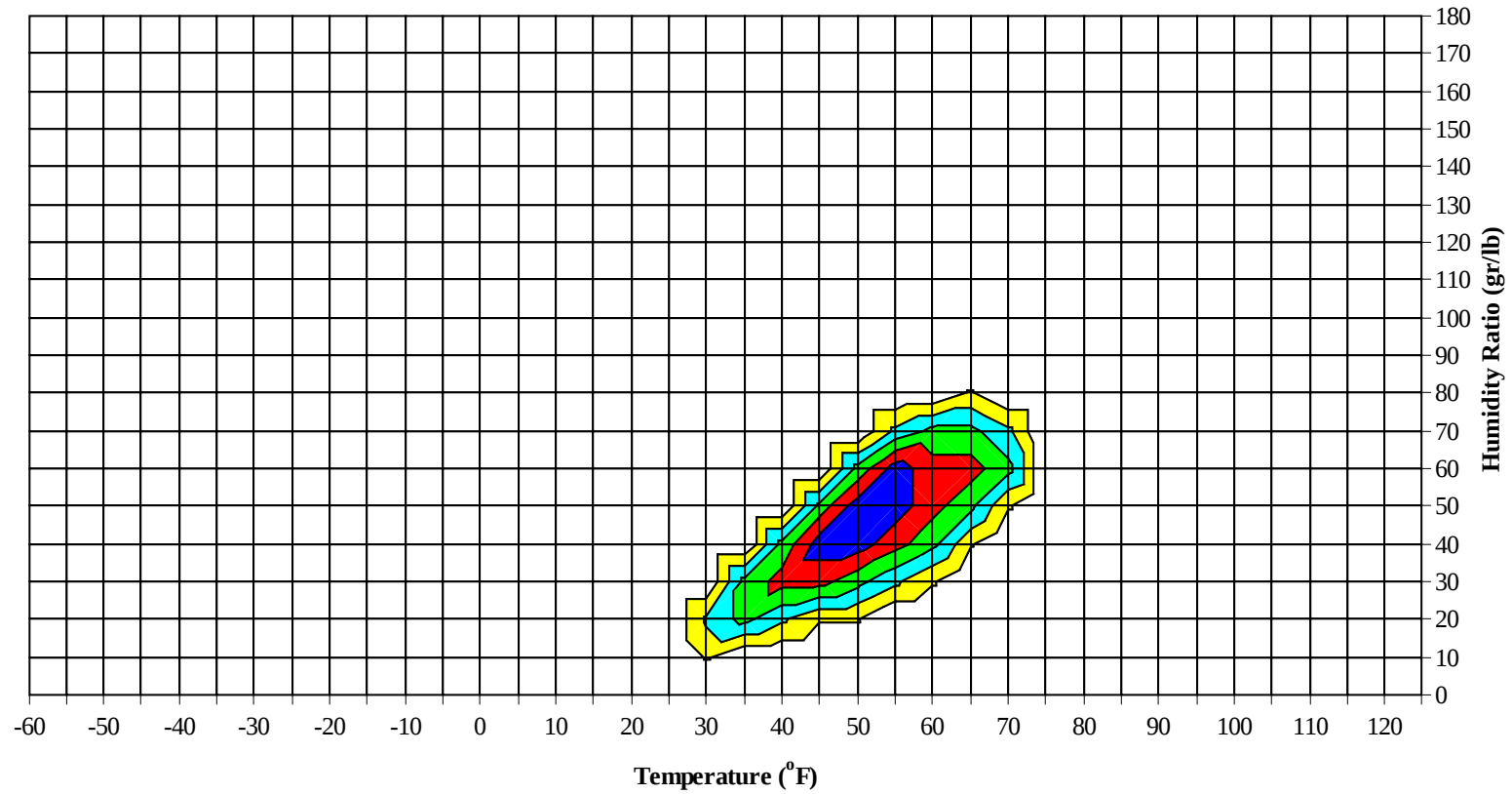
Average Annual Climate



**NORTH BEND      OR**

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### Long Term Psychrometric Summary

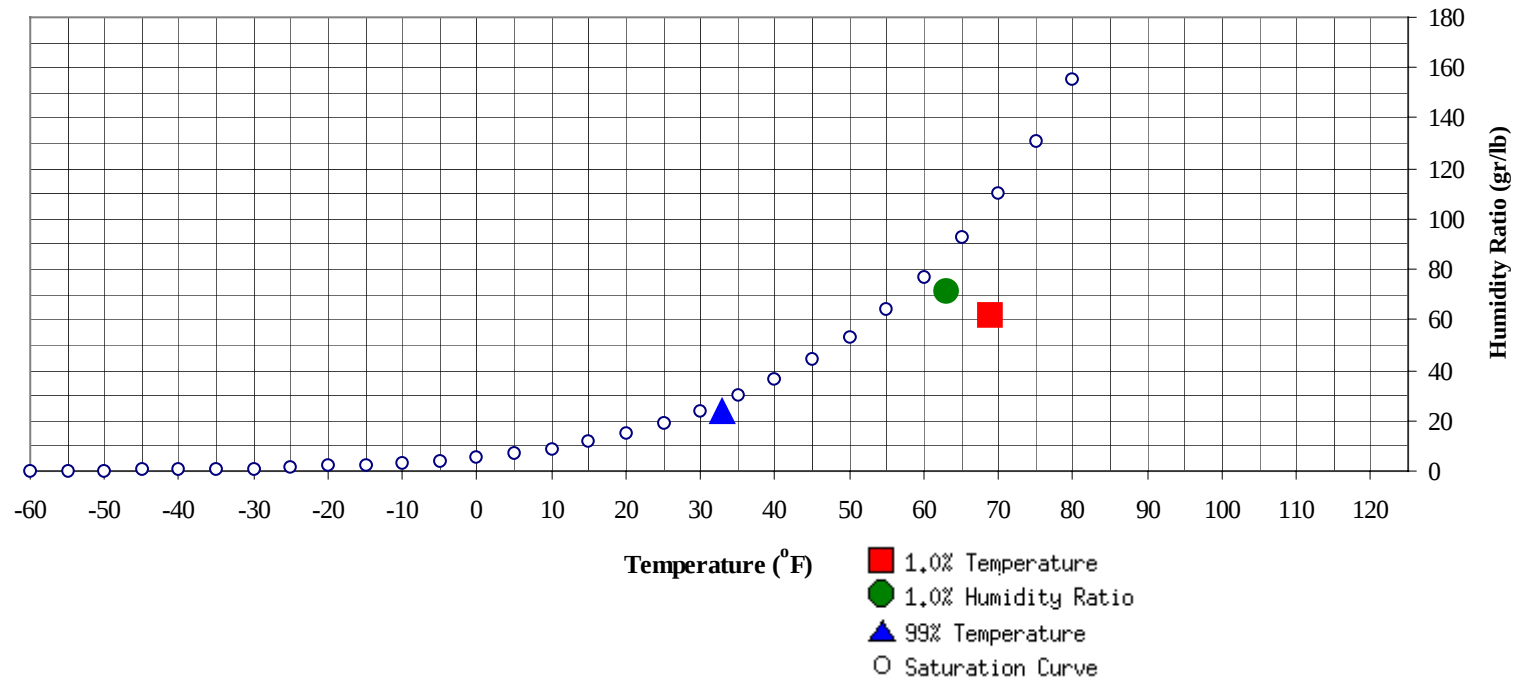


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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### Psychrometric Summary of Peak Design Values



|              | (°F) | MCHR<br>(gr/lb) | Enthalpy<br>(btu/lb) | 1.0% Humidity<br>Ratio | (gr/lb) | MCDB<br>(°F) | MCWB<br>(°F) | MC Dewpt<br>(°F) | Enthalpy<br>(btu/lb) |
|--------------|------|-----------------|----------------------|------------------------|---------|--------------|--------------|------------------|----------------------|
|              |      |                 |                      |                        |         |              |              |                  |                      |
| 99% Dry Bulb | 33   | 23.4            | 11.5                 |                        | 71.4    | 63.1         | 59.9         | 57.9             | 26.3                 |

| 1.0% Dry Bulb | (°F) | MCHR<br>(gr/lb) | MCWB<br>(°F) | Enthalpy<br>(btu/lb) |
|---------------|------|-----------------|--------------|----------------------|
|               |      |                 |              |                      |
|               | 69   | 61.5            | 59.9         | 26.2                 |

**NORTH BEND OR**

WMO No. 726917

**Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)**

Period of Record = 1973 to 1996

| Temperature<br>Range<br>(°F) | January             |                |                |              |                          | February            |                |                |              |                          | March               |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 90 / 94                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 85 / 89                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 80 / 84                      |                     |                |                |              |                          |                     | 0              |                | 0            | 62.0                     |                     |                |                |              |                          |
| 75 / 79                      |                     |                |                |              |                          |                     | 0              | 0              | 0            | 61.0                     |                     | 0              |                | 0            | 57.2                     |
| 70 / 74                      |                     |                |                |              |                          |                     | 1              | 0              | 1            | 59.1                     |                     | 0              |                | 0            | 54.8                     |
| 65 / 69                      | 0                   | 1              | 0              | 1            | 54.1                     |                     | 3              | 0              | 3            | 55.6                     |                     | 2              | 0              | 2            | 54.8                     |
| 60 / 64                      | 1                   | 6              | 2              | 9            | 53.5                     | 1                   | 11             | 3              | 15           | 54.0                     | 0                   | 13             | 2              | 15           | 53.0                     |
| 55 / 59                      | 10                  | 34             | 12             | 56           | 52.0                     | 11                  | 40             | 18             | 68           | 52.3                     | 5                   | 58             | 18             | 81           | 51.2                     |
| 50 / 54                      | 34                  | 79             | 51             | 164          | 48.6                     | 33                  | 75             | 58             | 166          | 48.5                     | 40                  | 101            | 79             | 220          | 48.1                     |
| 45 / 49                      | 60                  | 70             | 81             | 211          | 44.6                     | 66                  | 57             | 74             | 197          | 44.6                     | 87                  | 57             | 94             | 238          | 44.5                     |
| 40 / 44                      | 64                  | 38             | 59             | 162          | 40.1                     | 50                  | 27             | 43             | 121          | 40.0                     | 71                  | 15             | 45             | 131          | 40.5                     |
| 35 / 39                      | 48                  | 14             | 31             | 94           | 35.4                     | 42                  | 8              | 21             | 71           | 35.5                     | 38                  | 2              | 9              | 49           | 36.3                     |
| 30 / 34                      | 23                  | 4              | 10             | 37           | 30.7                     | 17                  | 2              | 6              | 25           | 30.9                     | 7                   | 0              | 1              | 8            | 31.9                     |
| 25 / 29                      | 6                   | 1              | 2              | 9            | 25.5                     | 3                   | 0              | 1              | 4            | 25.9                     | 0                   |                |                | 0            | 27.2                     |
| 20 / 24                      | 1                   | 0              | 0              | 1            | 19.7                     | 0                   | 0              | 0              | 0            | 19.9                     |                     |                |                |              |                          |
| 15 / 19                      | 0                   |                |                | 0            | 17.0                     | 1                   |                |                | 1            | 15.6                     |                     |                |                |              |                          |
| 10 / 14                      | 0                   |                |                | 0            |                          |                     |                |                |              |                          |                     |                |                |              |                          |

**Caution:** This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

**NORTH BEND OR**

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**Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)**

Period of Record = 1973 to 1996

| Temperature<br>Range<br>(°F) | April               |                |                |              |                          | May                 |                |                |              |                          | June                |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 90 / 94                      |                     |                |                |              |                          |                     |                |                |              |                          |                     | 0              |                | 0            | 65.0                     |
| 85 / 89                      |                     | 0              |                | 0            | 63.0                     |                     |                |                |              |                          |                     | 0              |                | 0            | 62.3                     |
| 80 / 84                      |                     | 0              | 0              | 0            | 59.2                     |                     | 0              |                | 0            | 63.6                     |                     | 0              |                | 0            | 62.2                     |
| 75 / 79                      |                     | 0              | 0              | 0            | 57.5                     |                     | 1              | 0              | 1            | 62.3                     |                     | 1              | 0              | 1            | 62.1                     |
| 70 / 74                      |                     | 2              | 0              | 2            | 56.0                     | 0                   | 2              | 0              | 2            | 60.9                     | 0                   | 3              | 0              | 3            | 61.0                     |
| 65 / 69                      |                     | 5              | 1              | 6            | 56.1                     | 0                   | 10             | 1              | 11           | 58.1                     | 1                   | 31             | 4              | 36           | 58.4                     |
| 60 / 64                      | 0                   | 20             | 4              | 24           | 53.8                     | 3                   | 67             | 12             | 82           | 54.9                     | 8                   | 133            | 40             | 180          | 55.4                     |
| 55 / 59                      | 6                   | 83             | 25             | 114          | 51.2                     | 31                  | 121            | 75             | 227          | 51.9                     | 77                  | 64             | 120            | 261          | 53.3                     |
| 50 / 54                      | 50                  | 96             | 101            | 248          | 48.1                     | 103                 | 42             | 120            | 264          | 49.0                     | 118                 | 8              | 73             | 199          | 50.3                     |
| 45 / 49                      | 98                  | 28             | 84             | 210          | 44.8                     | 80                  | 5              | 37             | 122          | 45.4                     | 34                  | 0              | 4              | 38           | 46.2                     |
| 40 / 44                      | 63                  | 4              | 24             | 91           | 40.9                     | 29                  | 0              | 4              | 33           | 41.5                     | 3                   | 0              | 0              | 3            | 42.1                     |
| 35 / 39                      | 21                  | 1              | 2              | 24           | 36.6                     | 3                   |                |                | 3            | 37.3                     | 0                   |                |                | 0            | 38.3                     |
| 30 / 34                      | 2                   | 0              | 0              | 2            | 32.5                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

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**NORTH BEND OR**

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**Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)**

Period of Record = 1973 to 1996

| Temperature<br>Range<br>(°F) | July                |                |                |              |                          | August              |                |                |              |                          | September           |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 90 / 94                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                | 0              |              | 0 71.0                   |
| 85 / 89                      |                     | 0              |                | 0            | 67.0                     |                     |                |                |              |                          |                     |                | 1              | 1            | 64.5                     |
| 80 / 84                      |                     | 0              |                | 0            | 65.8                     |                     |                |                |              |                          |                     |                | 2              | 0            | 62.8                     |
| 75 / 79                      |                     | 1              | 0              | 1            | 62.3                     |                     | 1              | 0              | 1            | 61.2                     |                     |                | 0              | 3            | 60.9                     |
| 70 / 74                      | 0                   | 9              | 0              | 9            | 61.1                     | 0                   | 16             | 1              | 17           | 60.6                     | 0                   | 18             | 1              | 19           | 60.5                     |
| 65 / 69                      | 0                   | 97             | 15             | 112          | 58.7                     | 1                   | 102            | 17             | 120          | 58.9                     | 1                   | 66             | 11             | 77           | 58.7                     |
| 60 / 64                      | 28                  | 118            | 84             | 229          | 56.7                     | 27                  | 102            | 85             | 214          | 57.1                     | 20                  | 98             | 58             | 175          | 56.8                     |
| 55 / 59                      | 121                 | 22             | 123            | 265          | 54.3                     | 121                 | 24             | 119            | 264          | 54.6                     | 81                  | 40             | 106            | 227          | 54.3                     |
| 50 / 54                      | 88                  | 1              | 26             | 114          | 50.8                     | 85                  | 2              | 26             | 113          | 51.1                     | 93                  | 11             | 57             | 160          | 50.7                     |
| 45 / 49                      | 12                  | 0              | 1              | 13           | 47.0                     | 15                  | 0              | 0              | 15           | 47.0                     | 40                  | 1              | 8              | 49           | 46.7                     |
| 40 / 44                      | 0                   |                |                | 0            | 43.3                     | 0                   |                |                | 0            | 44.0                     | 6                   | 0              | 0              | 6            | 41.5                     |
| 35 / 39                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            | 36.8                     |
| 30 / 34                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

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**NORTH BEND OR**

WMO No. 726917

**Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)**

Period of Record = 1973 to 1996

| Temperature<br>Range<br>(°F) | October             |                |                |              |                          | November            |                |                |              |                          | December            |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 90 / 94                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 85 / 89                      |                     | 0              |                | 0            | 62.3                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 80 / 84                      |                     | 1              |                | 1            | 61.0                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 75 / 79                      |                     | 2              | 0              | 2            | 60.3                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 70 / 74                      | 0                   | 5              | 1              | 6            | 58.8                     |                     | 0              |                | 0            | 57.0                     |                     | 0              |                | 0            | 59.0                     |
| 65 / 69                      | 0                   | 24             | 2              | 26           | 57.5                     | 0                   | 3              | 0              | 3            | 57.4                     |                     | 1              | 0              | 1            | 54.8                     |
| 60 / 64                      | 5                   | 79             | 18             | 102          | 55.5                     | 3                   | 21             | 6              | 30           | 56.0                     | 2                   | 6              | 3              | 11           | 55.1                     |
| 55 / 59                      | 44                  | 86             | 76             | 207          | 53.3                     | 22                  | 67             | 31             | 121          | 53.0                     | 14                  | 34             | 18             | 66           | 52.6                     |
| 50 / 54                      | 82                  | 40             | 95             | 217          | 50.0                     | 54                  | 81             | 73             | 207          | 49.1                     | 36                  | 79             | 43             | 159          | 48.6                     |
| 45 / 49                      | 77                  | 9              | 48             | 134          | 45.8                     | 70                  | 45             | 70             | 184          | 45.0                     | 57                  | 74             | 79             | 210          | 44.5                     |
| 40 / 44                      | 34                  | 1              | 8              | 43           | 41.8                     | 49                  | 17             | 39             | 106          | 40.5                     | 64                  | 37             | 64             | 165          | 40.2                     |
| 35 / 39                      | 5                   |                | 0              | 5            | 37.0                     | 30                  | 4              | 16             | 50           | 35.8                     | 50                  | 12             | 31             | 93           | 35.7                     |
| 30 / 34                      | 0                   |                |                | 0            | 32.3                     | 12                  | 1              | 4              | 17           | 31.0                     | 19                  | 3              | 9              | 31           | 31.2                     |
| 25 / 29                      |                     |                |                |              |                          | 1                   | 0              | 1              | 2            | 26.4                     | 4                   | 1              | 2              | 7            | 25.8                     |
| 20 / 24                      |                     |                |                |              |                          | 0                   |                | 0              | 0            | 20.4                     | 1                   | 0              | 0              | 1            | 20.3                     |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            | 17.5                     |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

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**NORTH BEND      OR**

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**Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)**

Period of Record = 1973 to 1996

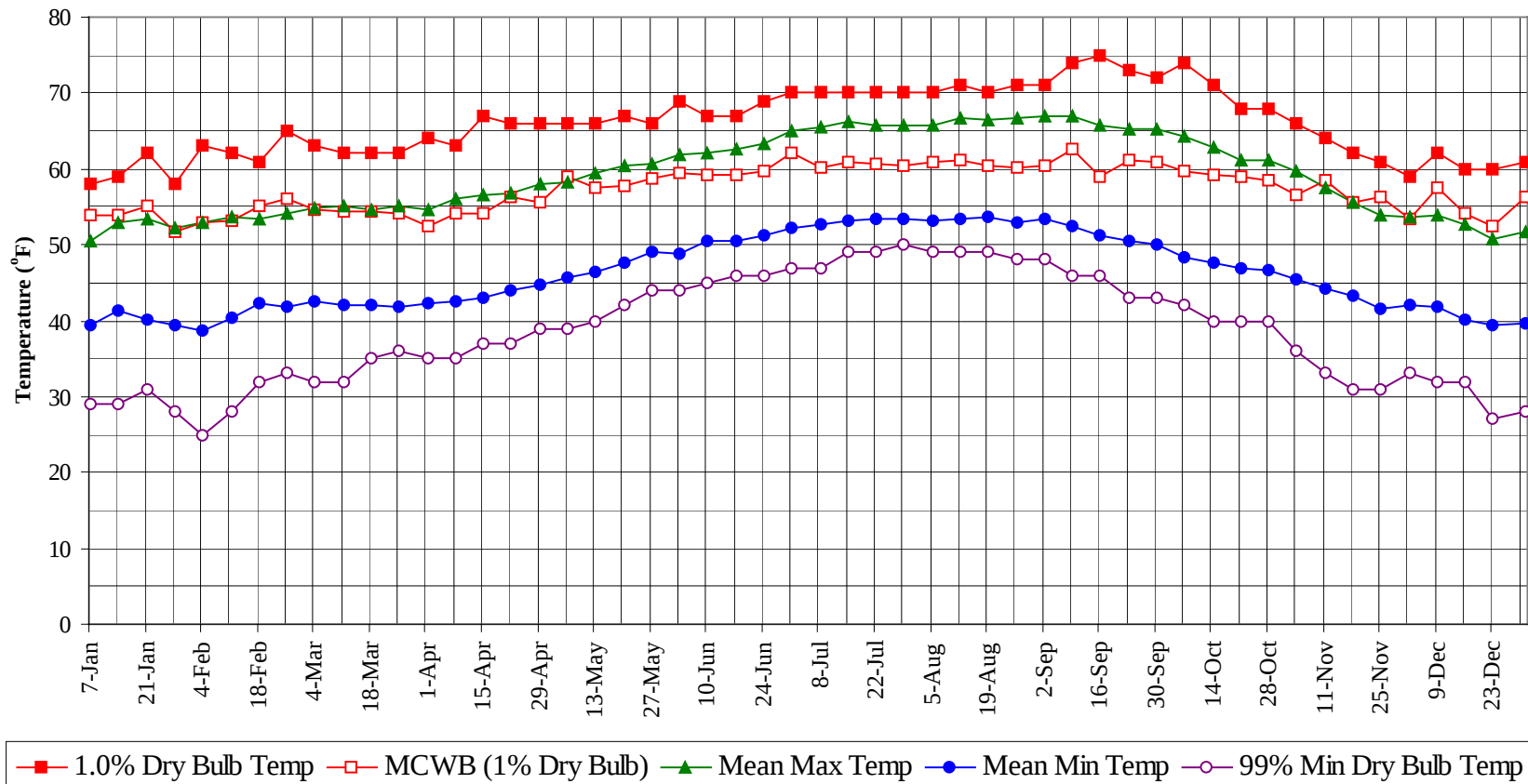
| Annual Totals                |                     |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|
| Temperature<br>Range<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 90 / 94                      | 0                   |                |                | 0            | 68.0                     |
| 85 / 89                      | 1                   |                |                | 1            | 64.2                     |
| 80 / 84                      | 3                   |                |                | 0            | 62.4                     |
| 75 / 79                      | 0                   | 9              | 1              | 10           | 60.9                     |
| 70 / 74                      | 1                   | 58             | 4              | 63           | 60.3                     |
| 65 / 69                      | 4                   | 341            | 50             | 396          | 58.5                     |
| 60 / 64                      | 99                  | 669            | 312            | 1080         | 56.1                     |
| 55 / 59                      | 538                 | 675            | 736            | 1949         | 53.2                     |
| 50 / 54                      | 813                 | 618            | 801            | 2231         | 49.2                     |
| 45 / 49                      | 695                 | 349            | 585            | 1629         | 45.0                     |
| 40 / 44                      | 433                 | 141            | 287            | 861          | 40.5                     |
| 35 / 39                      | 239                 | 42             | 109            | 390          | 35.8                     |
| 30 / 34                      | 81                  | 10             | 30             | 121          | 31.0                     |
| 25 / 29                      | 15                  | 2              | 5              | 22           | 25.8                     |
| 20 / 24                      | 2                   | 1              | 1              | 4            | 20.0                     |
| 15 / 19                      | 1                   |                |                | 1            | 16.0                     |
| 10 / 14                      | 0                   |                |                | 0            |                          |

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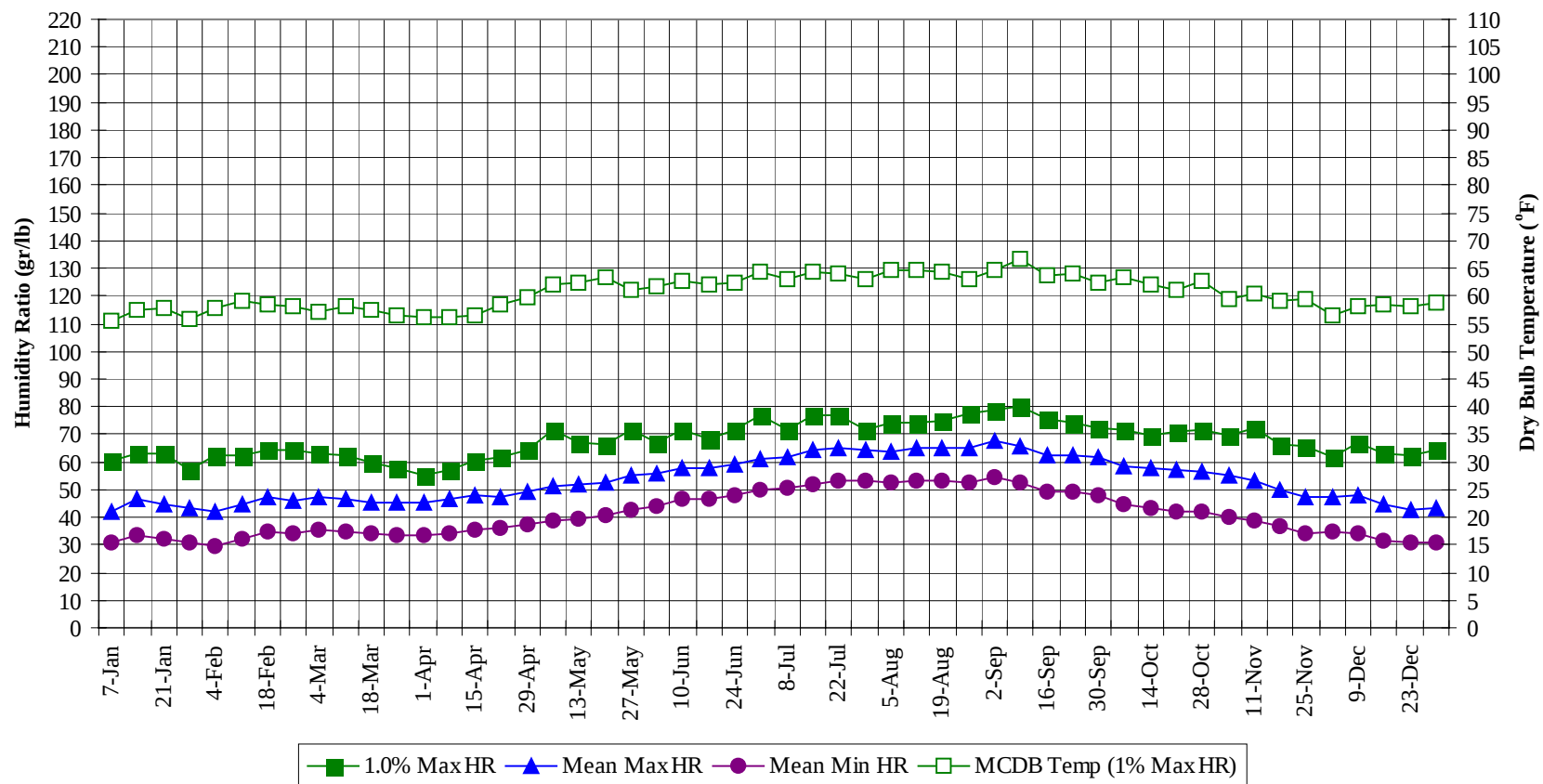
NORTH BEND OR

WMO No. 726917

### Annual Summary of Temperatures



## Long Term Humidity and Dry Bulb Temperature Summary



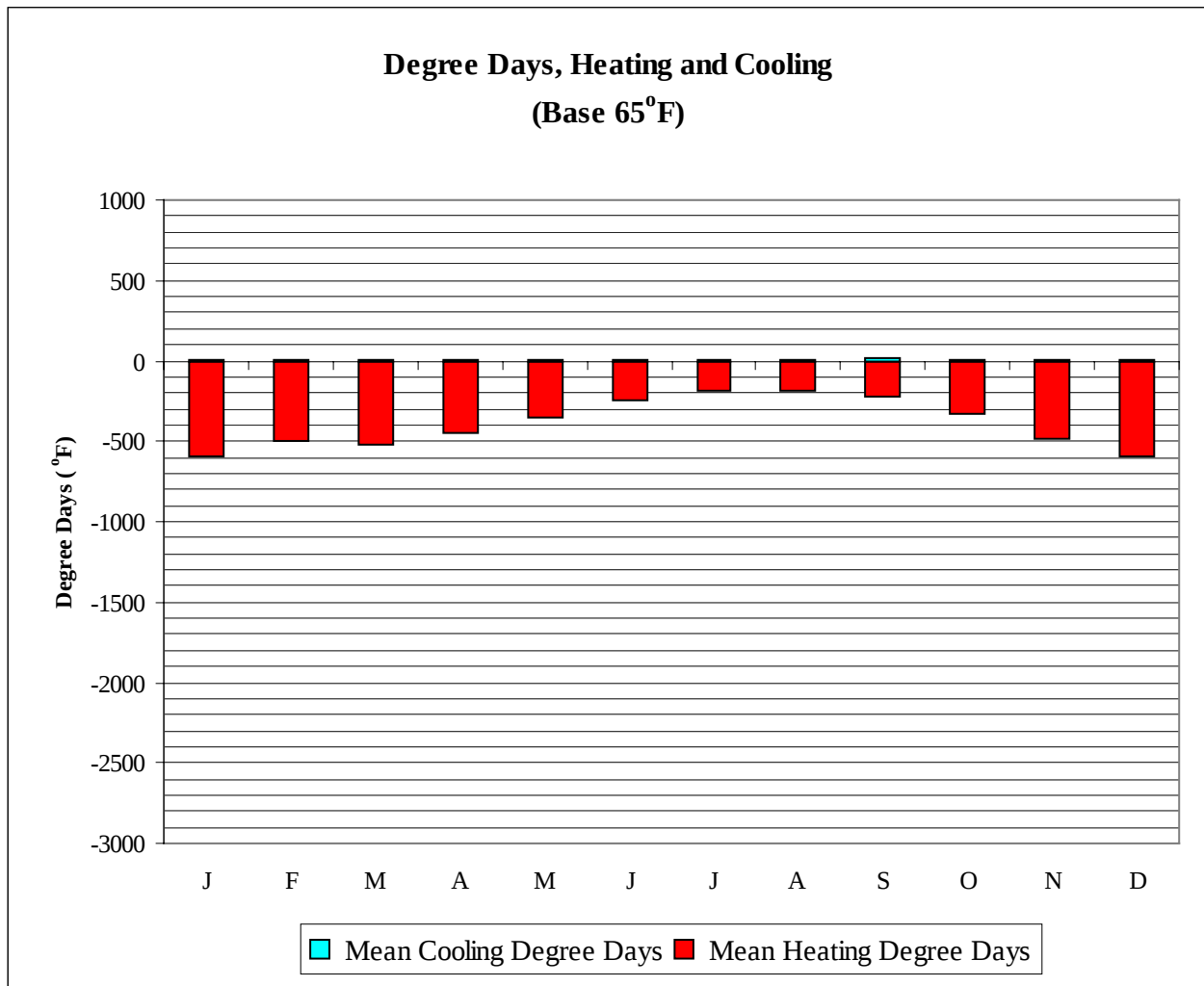
**NORTH BEND****OR****WMO No. 726917****Long Term Dry Bulb Temperature and Humidity Summary**

| Week Ending | 1.0% Temp (°F) | MCWB @ 1% Temp (°F) | Mean Max Temp (°F) | Mean Min Temp (°F) | 99% Temp (°F) | 1.0% HR (gr/lb) | MCDB @ 1% HR (°F) | Mean Max HR (gr/lb) | Mean Min HR (gr/lb) |
|-------------|----------------|---------------------|--------------------|--------------------|---------------|-----------------|-------------------|---------------------|---------------------|
| 7-Jan       | 58.0           | 53.8                | 50.4               | 39.4               | 29.0          | 60.2            | 55.6              | 41.8                | 30.7                |
| 14-Jan      | 59.0           | 53.8                | 52.9               | 41.3               | 29.0          | 63.0            | 57.5              | 46.8                | 33.5                |
| 21-Jan      | 62.0           | 55.1                | 53.5               | 40.1               | 31.0          | 63.0            | 57.8              | 44.6                | 32.1                |
| 28-Jan      | 58.0           | 51.6                | 52.1               | 39.4               | 28.0          | 57.4            | 55.7              | 43.2                | 31.1                |
| 4-Feb       | 63.0           | 52.8                | 52.9               | 38.7               | 25.0          | 62.3            | 57.8              | 42.4                | 29.7                |
| 11-Feb      | 62.0           | 53.3                | 53.7               | 40.4               | 28.0          | 62.3            | 59.2              | 44.4                | 32.4                |
| 18-Feb      | 61.0           | 55.1                | 53.4               | 42.4               | 32.0          | 64.4            | 58.5              | 47.1                | 34.8                |
| 25-Feb      | 65.0           | 56.1                | 54.2               | 41.8               | 33.0          | 64.4            | 58.1              | 45.9                | 34.3                |
| 4-Mar       | 63.0           | 54.7                | 54.9               | 42.6               | 32.0          | 63.0            | 57.3              | 47.1                | 35.2                |
| 11-Mar      | 62.0           | 54.3                | 55.2               | 42.0               | 32.0          | 62.3            | 58.1              | 46.8                | 34.7                |
| 18-Mar      | 62.0           | 54.5                | 54.6               | 42.1               | 35.0          | 59.5            | 57.3              | 45.6                | 34.1                |
| 25-Mar      | 62.0           | 54.2                | 55.0               | 41.7               | 36.0          | 58.1            | 56.5              | 45.5                | 33.3                |
| 1-Apr       | 64.0           | 52.5                | 54.7               | 42.3               | 35.0          | 55.3            | 56.2              | 45.3                | 33.6                |
| 8-Apr       | 63.0           | 54.1                | 56.1               | 42.4               | 35.0          | 57.4            | 56.0              | 46.6                | 34.2                |
| 15-Apr      | 67.0           | 54.1                | 56.7               | 43.0               | 37.0          | 60.2            | 56.5              | 47.7                | 35.2                |
| 22-Apr      | 66.0           | 56.4                | 56.8               | 44.0               | 37.0          | 61.6            | 58.6              | 47.6                | 35.8                |
| 29-Apr      | 66.0           | 55.5                | 58.0               | 44.7               | 39.0          | 64.4            | 59.8              | 49.2                | 37.1                |
| 6-May       | 66.0           | 58.9                | 58.3               | 45.7               | 39.0          | 71.4            | 62.1              | 50.9                | 38.8                |
| 13-May      | 66.0           | 57.6                | 59.4               | 46.5               | 40.0          | 67.2            | 62.4              | 51.7                | 39.3                |
| 20-May      | 67.0           | 57.9                | 60.4               | 47.5               | 42.0          | 66.5            | 63.4              | 52.8                | 40.7                |
| 27-May      | 66.0           | 58.8                | 60.7               | 49.0               | 44.0          | 71.4            | 61.0              | 55.5                | 42.9                |
| 3-Jun       | 69.0           | 59.4                | 61.9               | 48.7               | 44.0          | 67.2            | 61.7              | 55.7                | 43.8                |
| 10-Jun      | 67.0           | 59.3                | 62.1               | 50.4               | 45.0          | 71.4            | 62.9              | 58.0                | 46.4                |
| 17-Jun      | 67.0           | 59.1                | 62.6               | 50.5               | 46.0          | 68.6            | 61.9              | 57.5                | 46.6                |
| 24-Jun      | 69.0           | 59.7                | 63.3               | 51.1               | 46.0          | 71.4            | 62.4              | 59.3                | 47.8                |
| 1-Jul       | 70.0           | 62.2                | 64.9               | 52.3               | 47.0          | 77.0            | 64.5              | 61.4                | 49.9                |
| 8-Jul       | 70.0           | 60.2                | 65.5               | 52.7               | 47.0          | 71.4            | 63.1              | 61.9                | 50.5                |
| 15-Jul      | 70.0           | 61.0                | 66.2               | 53.2               | 49.0          | 77.0            | 64.4              | 64.3                | 52.1                |
| 22-Jul      | 70.0           | 60.8                | 65.7               | 53.5               | 49.0          | 77.0            | 64.1              | 64.8                | 52.9                |
| 29-Jul      | 70.0           | 60.4                | 65.6               | 53.5               | 50.0          | 71.4            | 63.2              | 64.4                | 53.4                |
| 5-Aug       | 70.0           | 60.8                | 65.7               | 53.2               | 49.0          | 74.2            | 64.7              | 63.7                | 52.6                |
| 12-Aug      | 71.0           | 61.1                | 66.6               | 53.4               | 49.0          | 74.2            | 64.7              | 64.7                | 53.2                |
| 19-Aug      | 70.0           | 60.3                | 66.4               | 53.7               | 49.0          | 74.9            | 64.5              | 65.0                | 53.1                |
| 26-Aug      | 71.0           | 60.3                | 66.8               | 52.8               | 48.0          | 77.7            | 62.9              | 64.8                | 52.4                |
| 2-Sep       | 71.0           | 60.5                | 67.0               | 53.5               | 48.0          | 79.1            | 64.7              | 67.4                | 54.5                |
| 9-Sep       | 74.0           | 62.7                | 67.0               | 52.5               | 46.0          | 79.8            | 66.6              | 65.7                | 52.3                |
| 16-Sep      | 75.0           | 58.9                | 65.7               | 51.4               | 46.0          | 75.6            | 63.8              | 62.7                | 49.4                |
| 23-Sep      | 73.0           | 61.1                | 65.1               | 50.5               | 43.0          | 74.2            | 64.0              | 62.1                | 49.0                |
| 30-Sep      | 72.0           | 60.8                | 65.3               | 50.1               | 43.0          | 72.1            | 62.4              | 61.6                | 48.3                |
| 7-Oct       | 74.0           | 59.8                | 64.3               | 48.2               | 42.0          | 71.4            | 63.5              | 58.8                | 44.4                |
| 14-Oct      | 71.0           | 59.2                | 62.9               | 47.5               | 40.0          | 69.3            | 62.1              | 57.8                | 43.5                |
| 21-Oct      | 68.0           | 58.9                | 61.2               | 46.9               | 40.0          | 70.7            | 61.1              | 56.9                | 42.1                |
| 28-Oct      | 68.0           | 58.5                | 61.0               | 46.7               | 40.0          | 71.4            | 62.6              | 56.7                | 42.1                |
| 4-Nov       | 66.0           | 56.5                | 59.6               | 45.3               | 36.0          | 69.3            | 59.5              | 55.2                | 40.3                |
| 11-Nov      | 64.0           | 58.6                | 57.6               | 44.2               | 33.0          | 72.1            | 60.3              | 53.0                | 39.0                |
| 18-Nov      | 62.0           | 55.6                | 55.5               | 43.4               | 31.0          | 66.5            | 59.2              | 50.0                | 36.8                |
| 25-Nov      | 61.0           | 56.4                | 54.0               | 41.7               | 31.0          | 65.8            | 59.4              | 47.4                | 33.9                |
| 2-Dec       | 59.0           | 53.4                | 53.8               | 42.1               | 33.0          | 61.6            | 56.5              | 47.6                | 34.5                |
| 9-Dec       | 62.0           | 57.6                | 53.9               | 41.8               | 32.0          | 67.2            | 58.1              | 47.9                | 34.0                |
| 16-Dec      | 60.0           | 54.2                | 52.6               | 40.2               | 32.0          | 63.0            | 58.4              | 44.7                | 31.9                |
| 23-Dec      | 60.0           | 52.4                | 50.8               | 39.3               | 27.0          | 62.3            | 58.2              | 42.4                | 30.7                |
| 31-Dec      | 61.0           | 56.4                | 51.8               | 39.7               | 28.0          | 64.4            | 58.8              | 43.5                | 30.9                |

NORTH BEND

OR

WMO No. 726917



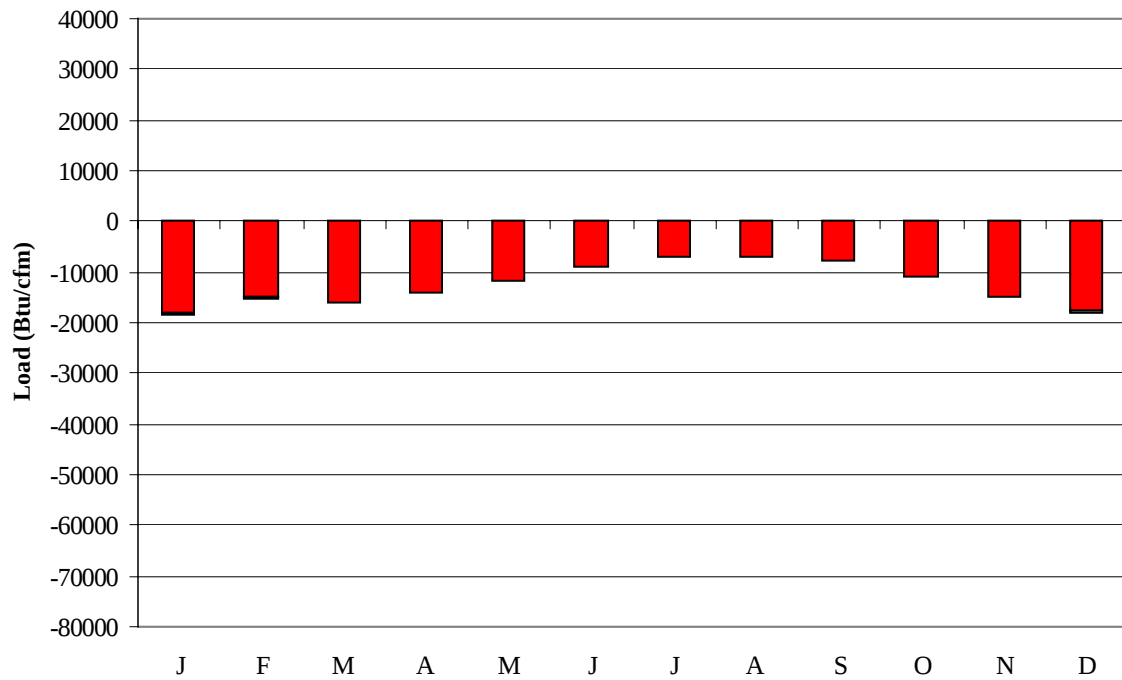
|     | Mean Cooling<br>Degree Days (°F) | Mean Heating<br>Degree Days (°F) |
|-----|----------------------------------|----------------------------------|
| JAN | 0                                | 596                              |
| FEB | 0                                | 495                              |
| MAR | 0                                | 520                              |
| APR | 1                                | 450                              |
| MAY | 2                                | 354                              |
| JUN | 3                                | 250                              |
| JUL | 8                                | 189                              |
| AUG | 11                               | 183                              |
| SEP | 12                               | 222                              |
| OCT | 4                                | 330                              |
| NOV | 0                                | 480                              |
| DEC | 0                                | 587                              |
| ANN | 42                               | 4656                             |

NORTH BEND

OR

WMO No. 726917

**Average Ventilation and Infiltration Loads**  
**(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)**



■ Average Sensible Cooling Load      ■ Average Sensible Heating Load  
■ Average Latent Cooling (Drying) Load      ■ Average Latent Heating (Humidifying) Load

|     | Average Sensible<br>Cooling Load | Average Sensible<br>Heating Load | Average Latent<br>Cooling Load | Average Latent<br>Heating Load |
|-----|----------------------------------|----------------------------------|--------------------------------|--------------------------------|
|     | (Btu/cfm)                        | (Btu/cfm)                        | (Btu/cfm)                      | (Btu/cfm)                      |
| JAN | 0                                | -17844                           | 0                              | -697                           |
| FEB | 1                                | -14950                           | 0                              | -483                           |
| MAR | 0                                | -15887                           | 0                              | -185                           |
| APR | 3                                | -13971                           | 0                              | -62                            |
| MAY | 3                                | -11554                           | 1                              | -7                             |
| JUN | 6                                | -8755                            | 3                              | 0                              |
| JUL | 4                                | -7115                            | 7                              | 0                              |
| AUG | 1                                | -6909                            | 6                              | 0                              |
| SEP | 23                               | -7873                            | 9                              | -1                             |
| OCT | 8                                | -10784                           | 1                              | -17                            |
| NOV | 0                                | -14755                           | 0                              | -280                           |
| DEC | 0                                | -17606                           | 0                              | -542                           |
| ANN | 49                               | -148003                          | 27                             | -2274                          |

## Average Annual Solar Radiation – Nearest Available Site

(Source: National Renewable Energy Laboratory, Golden CO, 1995)

City: NORTH BEND  
 State: OR  
 WBAN No: 24284  
 Lat(N): 43.42  
 Long(W): 124.25  
 Elev(ft): 16

Stn Type: Secondary  
 SHADING GEOMETRY IN DIMENSIONLESS UNITS  
 Window: 1  
 Overhang: 0.632  
 Vert Gap: 0.33

| AVERAGE INCIDENT SOLAR RADIATION (Btu/sq.ft./day), Percentage Uncertainty = 9 |         | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Year |
|-------------------------------------------------------------------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| HORIZ                                                                         | Global  | 490  | 700  | 1070 | 1480 | 1800 | 1950 | 2060 | 1780 | 1420 | 940  | 550  | 420  | 1220 |
|                                                                               | Std Dev | 53   | 74   | 98   | 100  | 115  | 140  | 146  | 121  | 82   | 77   | 56   | 46   | 34   |
|                                                                               | Minimum | 410  | 530  | 870  | 1260 | 1520 | 1600 | 1790 | 1530 | 1270 | 750  | 440  | 330  | 1140 |
|                                                                               | Maximum | 600  | 830  | 1280 | 1720 | 2060 | 2240 | 2440 | 2040 | 1570 | 1140 | 660  | 510  | 1280 |
|                                                                               | Diffuse | 280  | 400  | 560  | 720  | 800  | 830  | 720  | 660  | 520  | 410  | 310  | 250  | 540  |
| Clear Day                                                                     | Global  | 750  | 1100 | 1620 | 2160 | 2530 | 2680 | 2600 | 2280 | 1790 | 1240 | 820  | 650  | 1690 |
| NORTH                                                                         | Global  | 170  | 240  | 330  | 430  | 540  | 600  | 570  | 460  | 360  | 270  | 190  | 150  | 360  |
|                                                                               | Diffuse | 170  | 240  | 330  | 430  | 490  | 530  | 500  | 440  | 360  | 270  | 190  | 150  | 340  |
| Clear Day                                                                     | Global  | 150  | 220  | 300  | 410  | 580  | 700  | 650  | 460  | 330  | 240  | 170  | 140  | 360  |
| EAST                                                                          | Global  | 340  | 450  | 640  | 830  | 940  | 970  | 1010 | 890  | 800  | 590  | 370  | 290  | 680  |
|                                                                               | Diffuse | 200  | 280  | 400  | 520  | 590  | 610  | 580  | 530  | 440  | 330  | 230  | 180  | 410  |
| Clear Day                                                                     | Global  | 620  | 830  | 1110 | 1370 | 1510 | 1550 | 1520 | 1400 | 1190 | 910  | 670  | 560  | 1110 |
| SOUTH                                                                         | Global  | 800  | 880  | 990  | 1000 | 920  | 860  | 950  | 1060 | 1220 | 1130 | 830  | 740  | 950  |
|                                                                               | Diffuse | 300  | 380  | 480  | 550  | 570  | 580  | 560  | 540  | 490  | 420  | 320  | 270  | 460  |
| Clear Day                                                                     | Global  | 1840 | 1950 | 1860 | 1530 | 1200 | 1050 | 1110 | 1360 | 1710 | 1900 | 1860 | 1770 | 1590 |
| WEST                                                                          | Global  | 330  | 460  | 660  | 890  | 1060 | 1130 | 1210 | 1080 | 920  | 630  | 380  | 300  | 760  |
|                                                                               | Diffuse | 200  | 290  | 410  | 530  | 600  | 630  | 600  | 540  | 450  | 330  | 230  | 180  | 420  |
| Clear Day                                                                     | Global  | 620  | 830  | 1110 | 1370 | 1510 | 1550 | 1520 | 1400 | 1190 | 910  | 670  | 560  | 1110 |

## Average Annual Solar Heat and Illumination – Nearest Available Site

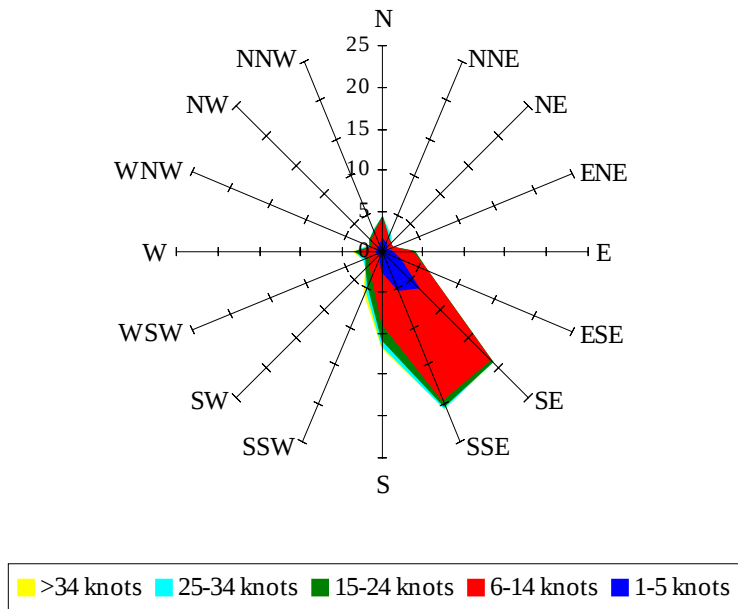
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

| AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9 |          | Jan | Feb | Mar | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct | Nov | Dec | Year |
|-----------------------------------------------------------------------------------------------------|----------|-----|-----|-----|------|------|------|------|------|------|-----|-----|-----|------|
| HORIZ                                                                                               | Unshaded | 310 | 470 | 750 | 1060 | 1310 | 1420 | 1510 | 1290 | 1010 | 650 | 360 | 260 | 870  |
| NORTH                                                                                               | Unshaded | 120 | 160 | 230 | 300  | 360  | 400  | 370  | 310  | 250  | 190 | 130 | 100 | 240  |
|                                                                                                     | Shaded   | 97  | 140 | 190 | 260  | 310  | 340  | 330  | 270  | 220  | 160 | 110 | 85  | 210  |
| EAST                                                                                                | Unshaded | 230 | 320 | 450 | 590  | 660  | 690  | 710  | 630  | 560  | 410 | 260 | 200 | 480  |
|                                                                                                     | Shaded   | 200 | 270 | 380 | 480  | 530  | 550  | 560  | 510  | 470  | 350 | 220 | 170 | 390  |
| SOUTH                                                                                               | Unshaded | 600 | 650 | 700 | 670  | 580  | 530  | 580  | 690  | 840  | 820 | 620 | 560 | 650  |
|                                                                                                     | Shaded   | 580 | 590 | 530 | 410  | 340  | 340  | 340  | 370  | 570  | 700 | 590 | 540 | 490  |
| WEST                                                                                                | Unshaded | 230 | 320 | 470 | 630  | 750  | 810  | 860  | 770  | 660  | 440 | 260 | 200 | 530  |
|                                                                                                     | Shaded   | 200 | 270 | 390 | 520  | 610  | 650  | 700  | 630  | 550  | 380 | 220 | 180 | 440  |

| AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9 |          | March |      |     |     |     | June |      |     |     |     |
|------------------------------------------------------------------------------------------------------------------|----------|-------|------|-----|-----|-----|------|------|-----|-----|-----|
|                                                                                                                  |          | 9am   | 11am | 1pm | 3pm | 5pm | 9am  | 11am | 1pm | 3pm | 5pm |
| HORIZ.                                                                                                           | M.Clear  | 31    | 64   | 76  | 63  | 29  | 44   | 80   | 99  | 96  | 74  |
|                                                                                                                  | M.Cloudy | 19    | 39   | 46  | 40  | 18  | 25   | 47   | 66  | 67  | 48  |
| NORTH                                                                                                            | M.Clear  | 9     | 13   | 14  | 13  | 8   | 18   | 15   | 16  | 16  | 14  |
|                                                                                                                  | M.Cloudy | 8     | 14   | 15  | 14  | 8   | 12   | 17   | 19  | 19  | 16  |
| EAST                                                                                                             | M.Clear  | 67    | 59   | 14  | 13  | 8   | 78   | 75   | 36  | 16  | 14  |
|                                                                                                                  | M.Cloudy | 24    | 30   | 15  | 14  | 8   | 27   | 37   | 29  | 19  | 16  |
| SOUTH                                                                                                            | M.Clear  | 34    | 72   | 85  | 70  | 32  | 11   | 33   | 52  | 49  | 28  |
|                                                                                                                  | M.Cloudy | 15    | 35   | 42  | 36  | 14  | 10   | 23   | 36  | 36  | 21  |
| WEST                                                                                                             | M.Clear  | 9     | 13   | 16  | 62  | 67  | 11   | 15   | 16  | 46  | 80  |
|                                                                                                                  | M.Cloudy | 8     | 14   | 16  | 32  | 24  | 10   | 17   | 19  | 34  | 44  |
| M.Clear                                                                                                          | (% hrs)  | 18    | 19   | 21  | 18  | 18  | 23   | 31   | 37  | 41  | 41  |
|                                                                                                                  |          | Sept  |      |     |     |     | Dec  |      |     |     |     |
|                                                                                                                  |          | 9am   | 11am | 1pm | 3pm | 5pm | 9am  | 11am | 1pm | 3pm | 5pm |
| HORIZ.                                                                                                           | M.Clear  | 23    | 60   | 80  | 77  | 50  | 7    | 31   | 40  | 25  | 2   |
|                                                                                                                  | M.Cloudy | 13    | 36   | 54  | 51  | 32  | 5    | 19   | 23  | 16  | 2   |
| NORTH                                                                                                            | M.Clear  | 7     | 13   | 15  | 14  | 11  | 3    | 8    | 9   | 7   | 1   |
|                                                                                                                  | M.Cloudy | 6     | 13   | 17  | 16  | 12  | 2    | 8    | 9   | 7   | 1   |
| EAST                                                                                                             | M.Clear  | 62    | 72   | 33  | 14  | 11  | 28   | 39   | 9   | 7   | 1   |
|                                                                                                                  | M.Cloudy | 17    | 32   | 25  | 16  | 12  | 7    | 15   | 9   | 7   | 1   |
| SOUTH                                                                                                            | M.Clear  | 18    | 57   | 78  | 74  | 46  | 24   | 73   | 87  | 62  | 7   |
|                                                                                                                  | M.Cloudy | 8     | 27   | 46  | 43  | 25  | 6    | 24   | 29  | 20  | 2   |
| WEST                                                                                                             | M.Clear  | 7     | 13   | 15  | 47  | 76  | 3    | 8    | 15  | 43  | 10  |
|                                                                                                                  | M.Cloudy | 6     | 13   | 17  | 31  | 36  | 2    | 8    | 11  | 16  | 2   |
| M.Clear                                                                                                          | (% hrs)  | 29    | 40   | 50  | 54  | 52  | 20   | 21   | 20  | 20  | 21  |

## Wind Summary - December, January, and February

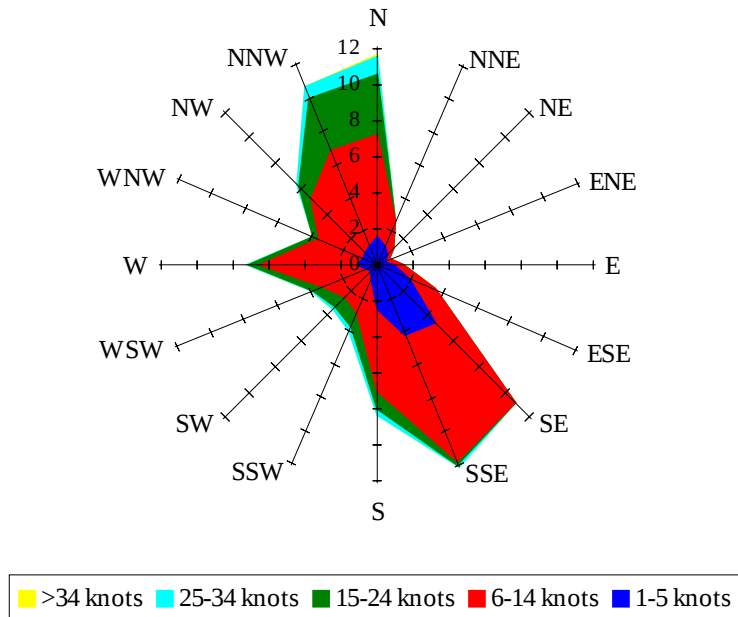
Labels of Percent Frequency on North Axis



Percent Calm = 9.48

## Wind Summary - March, April, and May

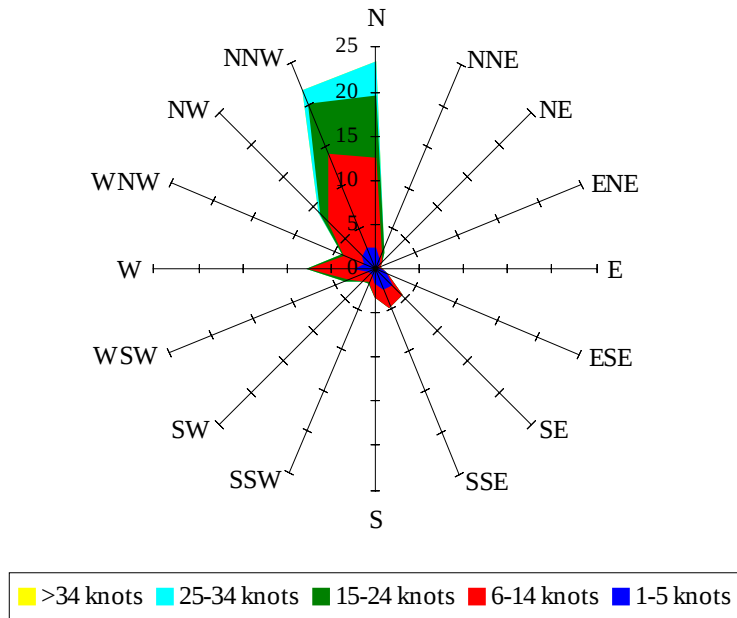
Labels of Percent Frequency on North Axis



Percent Calm = 8.73

### Wind Summary - June, July, and August

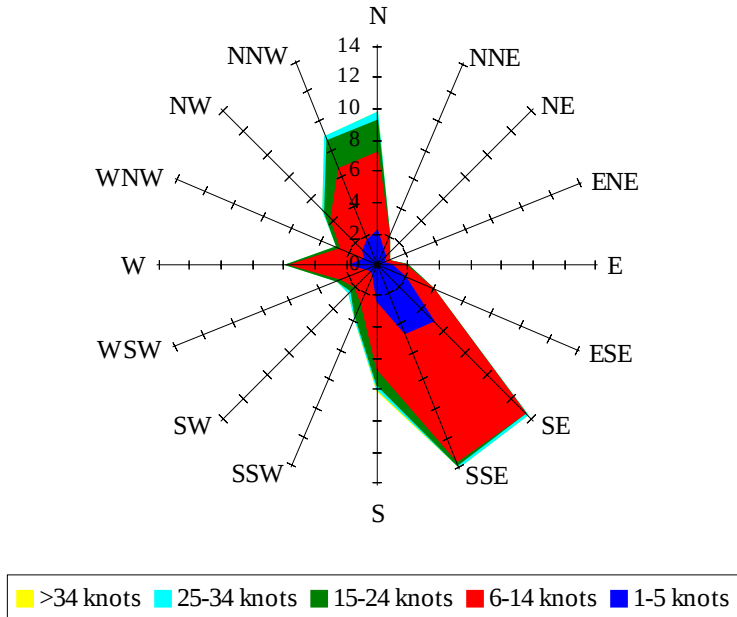
Labels of Percent Frequency on North Axis



Percent Calm = 10.43

### Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 14.18