

APPENDIX B
Meteorological

APPENDIX B

METEOROLOGICAL INFORMATION

B-1 METEOROLOGICAL DATA

USEW collects on-site data from instruments located 15 feet above the southeast corner of the receiving building roof. The USEW data was not used to determine wind frequency for 2017.

Wind Frequency data was obtained from the Hanford Meteorological Station (HMS Station 21), which was collected by the MESOWEST website (<http://mesowest.utah.edu/>). HMS is approximately 1 mile from our facility, and has similar weather. Attachment B-2 is the wind rose for the Hanford Meteorological Station.

Attachment B-1 is a monthly weather summary prepared by the HMS staff.

The wind usually blows from the NW.

2017 average temperature: 11.75 C

2017 precipitation: 21.8 cm/year

ATTACHMENTS

B-1 Hanford Weather Summary

B-2 Wind Rose

Attachment B-1
Hanford Weather Summary



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

January 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows 1-31 and summary rows SUM and AVG.

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SNOW, ICE PELLETS (SLEET) (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, HEATING DEGREE DAYS (BASE 65°F), AVERAGE PSYCHROMETRIC DATA, RELATIVE HUMIDITY EXTREMES (%). Includes sub-headers like 'TRACE OR MORE', 'GREATEST IN 24 HR', 'NUMBER OF DAYS WITH:', 'AVERAGE FOR THE MONTH', 'DEPARTURE FROM NORMAL', 'HIGHEST', 'LOWEST', 'GREATEST IN 24 HOURS', 'GREATEST ON GROUND', 'AVERAGE SPEED (MPH)', 'DEPARTURE FROM NORMAL', 'PEAK GUST', 'TOTAL FOR THE MONTH', 'DEPARTURE FROM NORMAL', 'SEASONAL TOTAL (SINCE JULY 1)', 'SEASONAL DEPARTURE FROM NORMAL'.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

February 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows 1-31, SUM, and AVG.

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, AVERAGE PSYCHROMETRIC DATA, RELATIVE HUMIDITY EXTREMES (%). Includes sub-sections for precipitation, wind, and humidity.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON
LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

March 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows 1-31, SUM, and AVG.

NOTES:

- (1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.
(2) "T" in Columns 7-9 denotes a trace.
(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, RELATIVE HUMIDITY EXTREMES (%). Includes rows for monthly averages and extremes.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

April 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes monthly summary (SUM, AVG) and a notes section.

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary and notes table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, RELATIVE HUMIDITY EXTREMES (%).



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON
LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

May 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows 1-31 and SUM/AVG.

NOTES:

- (1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.
(2) "T" in Columns 7-9 denotes a trace.
(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, RELATIVE HUMIDITY EXTREMES (%). Includes sub-sections for precipitation, temperature, wind, and humidity.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

June 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows for days 1-31 and summary rows (SUM, AVG).

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SNOW, ICE PELLETS (SLEET) (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, HEATING DEGREE DAYS (BASE 65°F), AVERAGE PSYCHROMETRIC DATA, RELATIVE HUMIDITY EXTREMES (%). Includes sub-headers like 'TOTAL FOR THE MONTH', 'GREATEST IN 24 HR', etc.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

July 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows 1-31, SUM, and AVG.

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, RELATIVE HUMIDITY EXTREMES (%). Includes sub-sections for precipitation, temperature, wind, and humidity.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

AUG 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows 1-31 and summary rows (SUM, AVG).

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, RELATIVE HUMIDITY EXTREMES (%). Includes sub-sections for precipitation, wind, and humidity.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON
LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

September 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows for days 1-31, SUM, and AVG.

NOTES:

- (1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.
(2) "T" in Columns 7-9 denotes a trace.
(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, RELATIVE HUMIDITY EXTREMES (%). Includes sub-sections for precipitation, wind, and humidity.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON
LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

October 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Includes rows 1-31 and summary rows (SUM, AVG).

NOTES:

- (1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.
(2) "T" in Columns 7-9 denotes a trace.
(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, BAROMETRIC PRESSURE (IN.), SOLAR RADIATION (LANGLEYS), WIND (50-FT LEVEL), MISCELLANEOUS NUMBER OF DAYS, RELATIVE HUMIDITY EXTREMES (%). Includes sub-sections for precipitation, wind, and humidity.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

November 2017

Main data table with columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Rows 1-31 and SUM/AVG.

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with columns: TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, TRACE OR MORE, 0.25 OR MORE, 1, BAROMETRIC PRESSURE (IN.), AVERAGE FOR THE MONTH, DEPARTURE FROM NORMAL, HIGHEST, LOWEST, NUMBER OF DAYS WITH: GREATEST IN 24 HOURS, GREATEST ON GROUND, WIND (50-FT LEVEL), AVERAGE SPEED (MPH), DEPARTURE FROM NORMAL, HEATING DEGREE DAYS (BASE 65°F), PEAK GUST, S @ 50, ON, AVERAGE PSYCHROMETRIC DATA, DRY BULB (°F), WET BULB (°F), SEASONAL TOTAL (SINCE JULY 1), REL. HUM. (%), SEASONAL DEPARTURE FROM NORMAL, +DENOTES LATEST OF SEVERAL DATES, HIGHEST, ON, LOWEST, ON.



CLIMATOLOGICAL DATA

HANFORD METEOROLOGY STATION

25 MILES N.W. OF RICHLAND, WASHINGTON

LATITUDE 46° 34' N., LONGITUDE 119° 36' W., ELEVATION (GROUND) 733 FEET

MONTH

December 2017

Table with 17 columns: DATE, TEMPERATURE (°F) (3-FT LEVEL), PRECIPITATION, WIND (50-FT LEVEL), AVERAGE REL HUM %, SOLRAD (LANGLEYS), SKY COVER (TENTHS FROM SUNRISE TO SUNSET), FRONTS AND MISC. PHENOMENA. Rows 1-31 and SUM/AVG.

NOTES:

(1) Unless otherwise specified, the daily summary period is from midnight to midnight Pacific Standard Time.

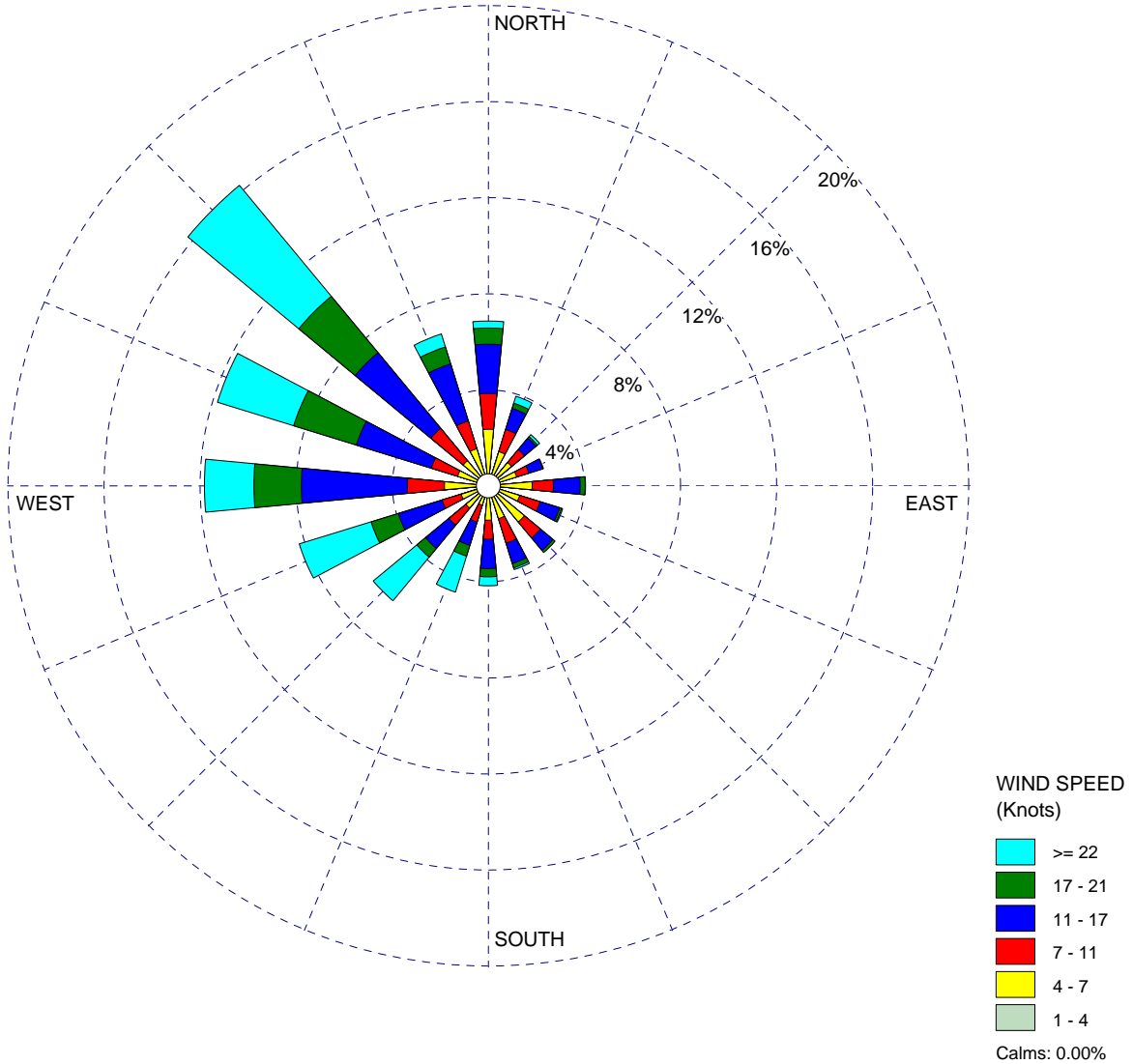
(2) "T" in Columns 7-9 denotes a trace.

(3) The Langley (Col. 15) is the unit used to denote one gram calorie/cm².

Summary table with 4 main sections: PRECIPITATION (IN.), MISC. PHENOMENA NOTATIONS USED IN COL. 17, TEMPERATURE (°F) (3-FT LEVEL), and AVERAGE PSYCHROMETRIC DATA. Includes sub-sections for BAROMETRIC PRESSURE, WIND, and RELATIVE HUMIDITY EXTREMES.

Attachment B-2
Wind Rose

**WIND ROSE PLOT:
US Ecology Washington**



COMMENTS:

Data is from the Hanford Met Station (HMS), collected by Mesowest (University of Utah).

COMPANY NAME:

USECOLOGY WASHINGTON

PROJECT NO.:

2017 USEW AER