

615 HW4

2024-09-25

####a Read in the data for all the years from 1985 to 2023.

```
library(data.table)
years <- 1985:2023
file_root <- "https://www.ndbc.noaa.gov/view_text_file.php?filename=44013h"
tail <- ".txt.gz&dir=data/historical/stdmet/"
all_data <- list()
for (year in years) {
  path <- paste0(file_root, year, tail)
  header <- scan(path, what = 'character', nlines = 1)
  skip_lines <- ifelse(year < 2007, 1, 2)
  buoy_data <- fread(path, header = FALSE, skip = skip_lines, fill = TRUE)
  if (ncol(buoy_data) == length(header)) {
    colnames(buoy_data) <- header
  } else {
    warning(paste("Data for year", year, "has inconsistent number of columns. Skipping header assignment."))
  }
  all_data[[as.character(year)]] <- buoy_data
}
```

```
## Warning in fread(path, header = FALSE, skip = skip_lines, fill = TRUE): Stopped
## early on line 5114. Expected 16 fields but found 17. Consider fill=17 or even
## more based on your knowledge of the input file. Use fill=Inf for reading the
## whole file for detecting the number of fields. First discarded non-empty line:
## <<2000 08 01 00 78 4.3 5.1 0.58 8.33 5.36 999 1022.9 17.3 17.5 15.0 99.0
## 99.00>>
```

```
## Warning: Data for year 2000 has inconsistent number of columns. Skipping header
## assignment.
```

```
lapply(names(all_data), function(year) {
  cat("\nYear:", year, "\n")
  print(all_data[[year]])
})
```

```

##
## Year: 1985
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    85      1      1      0      60      4      5      99      99      99      999 1030.3
## 2:    85      1      1      1      80      4      5      99      99      99      999 1030.0
## 3:    85      1      1      2     100      4      5      99      99      99      999 1030.1
## 4:    85      1      1      3     100      4      5      99      99      99      999 1029.4
## 5:    85      1      1      4     110      4      5      99      99      99      999 1028.6
## ----
## 8715:   85     12     31     19     200     10     13     99     99     99     999 1008.5
## 8716:   85     12     31     20     200     11     15     99     99     99     999 1008.0
## 8717:   85     12     31     21     200     10     12     99     99     99     999 1008.7
## 8718:   85     12     31     22     210      9     12     99     99     99     999 1009.0
## 8719:   85     12     31     23     210      8     10     99     99     99     999 1009.1
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    4.7      6.7      999      99
## 2:    5.1      6.7      999      99
## 3:    5.6      6.6      999      99
## 4:    5.8      6.7      999      99
## 5:    5.8      6.7      999      99
## ----
## 8715:   7.5      4.6      999      99
## 8716:   7.9      4.7      999      99
## 8717:   7.4      4.8      999      99
## 8718:   7.2      4.9      999      99
## 8719:   6.7      4.4      999      99
##
## Year: 1986
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    86      1      1      0     210      9     11     99.0  99.0  99.0  999 1009.2
## 2:    86      1      1      1     210      9     10     99.0  99.0  99.0  999 1009.3
## 3:    86      1      1      2     220      8     10     99.0  99.0  99.0  999 1009.2
## 4:    86      1      1      3     220      6      8     99.0  99.0  99.0  999 1009.3
## 5:    86      1      1      4     210      6      8     99.0  99.0  99.0  999 1009.0
## ----
## 8164:   86     12     31     19     320      8     10      3.0  11.1   8.3  999 1017.5
## 8165:   86     12     31     20     350      8      9      2.9  11.1   8.2  999 1018.8
## 8166:   86     12     31     21     320      9     11      2.7  11.1   8.4  999 1019.6
## 8167:   86     12     31     22     320      8     10      2.7  11.1   8.6  999 1021.0
## 8168:   86     12     31     23     290      7      8      2.9  11.1   8.7  999 1022.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    5.8      4.3      999      99
## 2:    4.7      4.3      999      99
## 3:    4.0      4.3      999      99
## 4:    3.9      4.3      999      99
## 5:    3.9      4.3      999      99
## ----
## 8164:   4.0      6.2      999      99
## 8165:   4.3      6.2      999      99
## 8166:   4.4      5.9      999      99
## 8167:   3.9      5.9      999      99
## 8168:   3.2      5.9      999      99
##
## Year: 1987
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    87      1      1      0     290      8.0  10.0   2.7  11.1   8.6  999 1023.5
## 2:    87      1      1      1     290      7.0   8.0    2.4  10.0   8.0  999 1024.3
## 3:    87      1      1      2     290      6.0   8.0    2.5  11.1   8.3  999 1023.8
## 4:    87      1      1      3     300      6.0   7.0    2.6  11.1   8.6  999 1024.1
## 5:    87      1      1      4     290      5.0   6.0    2.7  12.5   8.7  999 1025.2
## ----
## 7598:   87     12     31     19     177      8.6  10.1   0.4  11.1   4.7  999 1023.4
## 7599:   87     12     31     20     195      7.9   9.3    0.5  11.1   4.3  999 1023.6
## 7600:   87     12     31     21     193      7.6   9.0    0.4  10.0   4.1  999 1022.3
## 7601:   87     12     31     22     223      6.7   8.0    0.4  10.0   4.1  999 1022.1
## 7602:   87     12     31     23     225      5.0   6.0    0.3  12.5   4.4  999 1021.3
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    2.8      5.9      999      99
## 2:    2.0      5.9      999      99
## 3:    1.6      5.9      999      99
## 4:    1.3      6.0      999      99
## 5:    1.0      5.9      999      99
## ----
## 7598:   0.5      5.1      999      99
## 7599:   0.1      5.1      999      99
## 7600:   0.9      5.1      999      99
## 7601:   1.6      5.1      999      99
## 7602:   1.6      5.1      999      99

```

```

##
## Year: 1988
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    88      1      1      1    191    5.7    6.7    0.3    14.3    4.7    999    1020.1
## 2:    88      1      1      2    182    8.0    9.3    0.4    3.6    3.8    999    1018.9
## 3:    88      1      1      3    196    8.1    10.3    0.4    3.0    3.5    999    1019.0
## 4:    88      1      1      4    193    7.8    8.7    0.4    2.9    3.4    999    1019.0
## 5:    88      1      1      5    182    6.9    8.9    0.3    2.6    3.7    999    1018.9
## ----
## 8067:    88     12     31     19    259    8.8    11.5    0.4    3.3    3.4    999    1013.9
## 8068:    88     12     31     20    267    8.5    10.2    0.5    3.6    3.5    999    1014.7
## 8069:    88     12     31     21    277    9.7    12.2    0.6    3.4    3.5    999    1015.5
## 8070:    88     12     31     22    291    9.6    12.6    0.4    3.6    3.5    999    1016.4
## 8071:    88     12     31     23    284    7.1    8.8    0.3    3.1    3.3    999    1017.9
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.9    5.1    999    99
## 2:    4.6    5.1    999    99
## 3:    4.7    5.1    999    99
## 4:    4.4    5.1    999    99
## 5:    4.3    5.1    999    99
## ----
## 8067:    4.4    4.7    999    99
## 8068:    4.7    4.7    999    99
## 8069:    4.3    4.7    999    99
## 8070:    3.6    4.7    999    99
## 8071:    3.3    4.7    999    99
##
## Year: 1989
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    89      1      1      0    309    8.5    9.8    0.2    2.9    3.3    999    1018.6
## 2:    89      1      1      1    329    9.0    11.2    0.3    2.9    3.2    999    1020.1
## 3:    89      1      1      2    326    7.4    9.9    0.3    3.1    3.4    999    1022.3
## 4:    89      1      1      3    340    8.2    11.4    0.2    3.0    3.5    999    1022.5
## 5:    89      1      1      4    349    9.6    11.4    0.3    3.2    3.4    999    1022.5
## ----
## 7929:    89     12     31     19    158    7.1    8.2    1.0    6.2    5.3    999    1013.9
## 7930:    89     12     31     20    163    7.0    8.2    1.1    7.1    5.4    999    1012.7
## 7931:    89     12     31     21    160    7.3    8.2    1.0    6.7    5.5    999    1011.4
## 7932:    89     12     31     22    150    7.3    8.1    1.0    7.1    5.6    999    1009.6
## 7933:    89     12     31     23    159    7.5    8.4    1.0    7.1    5.6    999    1008.0
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    2.8    4.7    999    99
## 2:    1.7    4.7    999    99
## 3:    1.1    4.7    999    99
## 4:    0.2    4.7    999    99
## 5:   -0.7    4.7    999    99
## ----
## 7929:    3.4    2.9    999    99
## 7930:    3.2    2.9    999    99
## 7931:    3.7    2.9    999    99
## 7932:    4.4    3.2    999    99
## 7933:    3.9    3.2    999    99
##
## Year: 1990
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    90      1      1      0    149    9.5    10.8    1.1    7.1    5.5    999    1004.9
## 2:    90      1      1      1    149    9.9    11.6    1.2    7.1    5.5    999    1003.1
## 3:    90      1      1      2    182    7.8    9.7    1.1    7.1    5.4    999    1001.8
## 4:    90      1      1      3    200    9.5    10.9    1.0    7.1    5.4    999    1000.5
## 5:    90      1      1      4    199    9.9    11.8    1.1    7.1    5.5    999    999.6
## ----
## 8699:    90     12     31     19    337    9.6    12.4    0.7    10.0    4.4    999    1023.4
## 8700:    90     12     31     20    322    10.3    12.8    0.8    6.2    4.7    999    1024.9
## 8701:    90     12     31     21    325    8.4    10.9    0.7    11.1    4.9    999    1026.1
## 8702:    90     12     31     22    327    9.7    12.4    0.7    6.2    4.9    999    1027.2
## 8703:    90     12     31     23    326    9.0    12.0    0.7    7.1    5.2    999    1028.6
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    4.3    3.3    999    99
## 2:    5.4    3.3    999    99
## 3:    7.0    3.2    999    99
## 4:    8.8    3.2    999    99
## 5:    8.6    3.2    999    99
## ----
## 8699:    0.0    6.4    999    99
## 8700:   -0.5    6.4    999    99
## 8701:   -1.0    6.4    999    99
## 8702:   -2.1    6.4    999    99
## 8703:   -2.6    6.4    999    99

```

```

##
## Year: 1991
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    91      1      1      0    322    10.6    12.8    0.8    7.7    5.0    999    1029.7
## 2:    91      1      1      1    343     8.7    10.9    0.8    5.9    5.1    999    1031.1
## 3:    91      1      1      2    336     7.3    10.7    0.7    7.1    5.0    999    1031.7
## 4:    91      1      1      3    328     9.1    11.2    0.7    7.1    5.2    999    1031.8
## 5:    91      1      1      4    334    10.6    12.3    0.8    6.7    4.7    999    1032.6
## ----
## 8726:   91     12     31     19    285     3.4     5.0     2.0    10.0    7.8    999    1035.0
## 8727:   91     12     31     20    266     3.8     4.8     1.9    10.0    7.9    999    1034.8
## 8728:   91     12     31     21    269     4.4     5.5     1.7    10.0    7.6    999    1034.5
## 8729:   91     12     31     22    263     4.1     5.4     1.9    9.1    7.9    999    1034.4
## 8730:   91     12     31     23    254     4.5     5.7     1.6     8.3    7.6    999    1034.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    -3.0     6.4    999     99
## 2:    -3.4     6.4    999     99
## 3:    -4.1     6.4    999     99
## 4:    -4.3     6.4    999     99
## 5:    -4.4     6.4    999     99
## ----
## 8726:   0.8     5.5    999     99
## 8727:   1.6     5.5    999     99
## 8728:   2.0     5.5    999     99
## 8729:   2.1     5.6    999     99
## 8730:   2.3     5.6    999     99
##
## Year: 1992
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    92      1      1      1    249     5.9     7.0     1.2     7.7    7.3    999    1034.4
## 2:    92      1      1      2    260     5.6     6.3     1.1     7.7    7.5    999    1034.3
## 3:    92      1      1      3    269     5.0     5.9     1.1    11.1    7.6    999    1034.2
## 4:    92      1      1      4    281     5.2     6.4     1.0    10.0    8.1    999    1034.1
## 5:    92      1      1      5    280     5.4     6.4     1.0    10.0    8.1    999    1033.5
## ----
## 8732:   92     12     31     19    264     3.6     4.3     1.3     8.3    7.5    999    1007.0
## 8733:   92     12     31     20    248     2.5     3.1     1.3    10.0    7.7    999    1006.3
## 8734:   92     12     31     21    229     6.7     7.4     1.1    10.0    7.2    999    1005.5
## 8735:   92     12     31     22    236     8.8     9.8     1.0    10.0    7.4    999    1004.8
## 8736:   92     12     31     23    252     5.6     6.8     1.0    10.0    7.5    999    1005.6
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:     2.1     5.6    999     99
## 2:     1.7     5.6    999     99
## 3:     1.7     5.6    999     99
## 4:     1.7     5.6    999     99
## 5:     1.6     5.6    999     99
## ----
## 8732:   3.2     4.7    999     99
## 8733:   3.9     4.7    999     99
## 8734:   5.5     4.7    999     99
## 8735:   6.4     4.7    999     99
## 8736:   6.3     4.7    999     99
##
## Year: 1993
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    93      1      1      0    241     7.6     8.6     0.9    10.0    7.4    999    1006.3
## 2:    93      1      1      1    245     7.3     8.2     0.8    10.0    7.7    999    1006.3
## 3:    93      1      1      2    243     8.1     8.9     0.8    10.0    8.0    999    1006.5
## 4:    93      1      1      3    261     7.7     8.8     0.7     9.1    7.9    999    1006.5
## 5:    93      1      1      4    269     7.8     8.6     0.8     9.1    7.8    999    1007.0
## ----
## 8689:   93     12     31     19    228     9.7    12.1     0.8     3.4    3.4    217    1018.0
## 8690:   93     12     31     20    233    10.1    12.9     0.8     3.3    3.4    219    1018.6
## 8691:   93     12     31     21    255    10.8    14.4     0.9     3.4    3.4    241    1019.7
## 8692:   93     12     31     22    252     9.8    12.6     0.9     3.7    3.5    256    1020.7
## 8693:   93     12     31     23    260     9.4    13.3     0.8     3.4    3.4    267    1021.7
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:     6.7     4.7    999    99.0
## 2:     7.1     4.7    999    99.0
## 3:     7.4     4.4    999    99.0
## 4:     7.8     4.4    999    99.0
## 5:     7.9     4.4    999    99.0
## ----
## 8689:  -1.2     5.6    999    21.7
## 8690:  -0.8     5.6    999    21.9
## 8691:  -0.6     5.6    999    24.1
## 8692:  -0.8     5.6    999    25.6
## 8693:  -1.1     5.5    999    26.7

```

```

##
## Year: 1994
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    94      1      1      0    248    9.9  12.2  0.7  3.6  3.4  267 1022.5
## 2:    94      1      1      1    252   10.3  13.3  0.7  3.4  3.4  269 1022.7
## 3:    94      1      1      2    259   11.7  14.7  0.7  3.4  3.4  270 1023.4
## 4:    94      1      1      3    261   11.8  14.3  0.9  4.0  3.7  265 1023.7
## 5:    94      1      1      4    262   10.4  12.6  0.9  4.0  3.5  271 1024.1
## ----
## 8683:   94     12     31     19    160    5.7   6.7   0.4  10.0  5.7   74 1026.6
## 8684:   94     12     31     20    183    5.0   6.3   0.4   8.3  4.5   72 1026.5
## 8685:   94     12     31     21    191    7.2   9.1   0.4  10.0  4.2   48 1025.8
## 8686:   94     12     31     22    192    5.9   6.8   0.4   2.5  3.6  163 1025.7
## 8687:   94     12     31     23    186    7.7   9.9   0.5   2.9  3.3  171 1025.2
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -1.1    5.5   999  26.7
## 2:   -1.5    5.5   999  26.9
## 3:   -1.4    5.5   999  27.0
## 4:   -1.6    5.5   999  26.5
## 5:   -1.4    5.5   999  27.1
## ----
## 8683:   2.8  999.0   999   7.4
## 8684:   4.3  999.0   999   7.2
## 8685:   4.7  999.0   999   4.8
## 8686:   4.0  999.0   999  16.3
## 8687:   3.6  999.0   999  17.1
##
## Year: 1995
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    95      1      1      0    198    7.8   9.8   0.6   2.7  3.3  200 1024.4
## 2:    95      1      1      1    206    8.8  11.6   0.6   3.0  3.3  217 1023.8
## 3:    95      1      1      2    204    9.9  12.0   0.7   3.1  3.3  226 1022.5
## 4:    95      1      1      3    205   11.5  14.2   0.8   3.3  3.3  217 1021.5
## 5:    95      1      1      4    215   10.5  13.2   0.9   3.7  3.6  229 1021.4
## ----
## 8656:   95     12     31     19    245    4.3   5.3   0.2  12.5  5.8   74 1014.2
## 8657:   95     12     31     20    245    4.6   5.6   0.2  12.5  4.5   72 1014.3
## 8658:   95     12     31     21    231    3.3   4.2   0.2  14.3  4.8   77 1013.5
## 8659:   95     12     31     22    232    3.2   3.7   0.2  12.5  6.1   82 1014.3
## 8660:   95     12     31     23    226    3.3   4.1   0.2  14.3  6.4   77 1014.2
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.2  999.0   999  20.0
## 2:    3.5  999.0   999  21.7
## 3:    4.1  999.0   999  22.6
## 4:    5.1  999.0   999  21.7
## 5:    4.8  999.0   999  22.9
## ----
## 8656:   3.0   5.5   999   7.4
## 8657:   3.2   5.5   999   7.2
## 8658:   3.2   5.5   999   7.7
## 8659:   3.6   5.5   999   8.2
## 8660:   3.6   5.5   999   7.7
##
## Year: 1996
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    96      1      1      0    218    2.9   3.4   0.16  12.50  6.36   86 1013.9
## 2:    96      1      1      1    225    2.8   3.2   0.17  12.50  7.35   82 1014.0
## 3:    96      1      1      2    234    1.9   2.3   0.18  12.50  7.21   74 1013.5
## 4:    96      1      1      3    233    2.8   3.8   0.17  12.50  6.93   77 1013.3
## 5:    96      1      1      4    263    3.2   3.8   0.15  12.50  7.36   89 1013.4
## ----
## 8948:   96     12     31     19    337    7.6   9.8   0.86  4.55  3.85   49 1021.2
## 8949:   96     12     31     20    334    8.0  10.7   1.00  5.26  3.83   49 1021.1
## 8950:   96     12     31     21    326    8.6  10.5   1.23  5.00  4.09   48 1021.9
## 8951:   96     12     31     22    323   11.0  13.6   1.31  5.88  4.19   47 1023.1
## 8952:   96     12     31     23    332    9.4  12.2   1.32  5.26  4.13   47 1024.1
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.6   5.5   999   99
## 2:    3.5   5.5   999   99
## 3:    3.2   5.5   999   99
## 4:    3.5   5.5   999   99
## 5:    3.2   5.5   999   99
## ----
## 8948:  -7.0   6.3   999   99
## 8949:  -7.1   6.3   999   99
## 8950:  -7.2   6.3   999   99
## 8951:  -7.6   6.3   999   99
## 8952:  -8.0   6.3   999   99

```

```

##
## Year: 1997
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    97      1      1      0    322    10.7    13.7    1.27    4.17    4.13      5    1024.9
## 2:    97      1      1      1    312    10.8    13.8    1.41    5.26    4.14     40    1026.2
## 3:    97      1      1      2    323    11.4    14.0    1.43    4.55    4.25    355    1026.8
## 4:    97      1      1      3    336    11.4    14.2    1.57    5.56    4.40     42    1027.3
## 5:    97      1      1      4    333    10.9    14.0    1.83    6.67    4.76     45    1027.6
## ----
## 5708:   97     12     31     19    274    10.4    13.5    1.06    3.85    4.07    999    1004.0
## 5709:   97     12     31     20    290     9.7    12.5    1.02    12.50    4.03    999    1005.6
## 5710:   97     12     31     21    289    10.1    12.0    1.04    11.11    4.27    999    1007.7
## 5711:   97     12     31     22    305    10.4    13.4    0.91    12.50    3.93    999    1009.7
## 5712:   97     12     31     23    304    13.6    16.9    1.28    4.00    3.96    999    1011.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    -8.3     6.3    999     99
## 2:    -9.1     6.3    999     99
## 3:    -9.2     6.3    999     99
## 4:    -9.7     6.3    999     99
## 5:   -10.6     6.3    999     99
## ----
## 5708:   -1.5     5.9    999     99
## 5709:   -1.8     5.6    999     99
## 5710:   -3.1     5.5    999     99
## 5711:   -3.7     5.2    999     99
## 5712:   -4.8     5.1    999     99
##
## Year: 1998
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    98      1      1      0    295    10.8    15.4    1.34    4.35    4.24    999    1014.0
## 2:    98      1      1      1    287    10.6    13.9    1.29    4.35    4.11    999    1015.4
## 3:    98      1      1      2    286    11.7    15.5    1.12    4.00    4.00    999    1016.3
## 4:    98      1      1      3    286    11.9    15.0    1.04    4.00    3.94    999    1017.1
## 5:    98      1      1      4    295    12.2    14.7    1.26    4.17    4.02    999    1017.9
## ----
## 8780:   98     12     31     19    242     6.9     9.1    0.56    11.11    3.56    999    1017.8
## 8781:   98     12     31     20    242     6.6     8.6    0.53    2.86    3.58    999    1017.7
## 8782:   98     12     31     21    229     6.2     8.5    0.43    2.94    3.48    999    1017.9
## 8783:   98     12     31     22    207     5.6     7.7    0.39    10.00    4.25    999    1017.7
## 8784:   98     12     31     23    213     5.2     7.5    0.35    11.11    4.81    999    1017.4
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    -5.9     5.1    999     99
## 2:    -6.5     5.1    999     99
## 3:    -7.0     5.2    999     99
## 4:    -7.6     5.6    999     99
## 5:    -8.1     5.6    999     99
## ----
## 8780:   -5.5     5.9    999     99
## 8781:   -5.1     5.8    999     99
## 8782:   -4.6     5.6    999     99
## 8783:   -4.4     5.8    999     99
## 8784:   -4.5     5.6    999     99
##
## Year: 1999
##      YYYY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:   1999      1      1      0    221     5.4     7.2    0.33    11.11    5.25    999    1017.4
## 2:   1999      1      1      1    218     5.6     7.3    0.31    11.11    5.51    999    1016.5
## 3:   1999      1      1      2    226     5.7     7.0    0.32    12.50    6.53    999    1015.8
## 4:   1999      1      1      3    228     5.7     7.3    0.31    11.11    6.17    999    1015.3
## 5:   1999      1      1      4    237     5.9     7.7    0.39    11.11    5.02    999    1015.0
## ----
## 8344:  1999     12     31     19    340     4.9     6.5    0.65     9.09    3.92    999    1017.2
## 8345:  1999     12     31     20    350     4.5     5.9    0.58     4.17    4.04    999    1017.4
## 8346:  1999     12     31     21    346     3.2     4.6    0.58    11.11    4.24    999    1018.0
## 8347:  1999     12     31     22    360     3.3     4.1    0.51    10.00    4.21    999    1018.1
## 8348:  1999     12     31     23     5     1.2     2.3    0.51    10.00    4.40    999    1018.7
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    -4.3     5.6    999.0     99
## 2:    -4.0     5.7    999.0     99
## 3:    -3.9     5.7    999.0     99
## 4:    -3.9     5.7    999.0     99
## 5:    -3.8     5.6    999.0     99
## ----
## 8344:    0.1     5.9    -8.0     99
## 8345:    0.5     5.9    -8.2     99
## 8346:    0.8     5.9    -5.5     99
## 8347:    0.9     5.9    -4.3     99
## 8348:    1.2     5.9    -3.5     99

```

```

##
## Year: 2000
##      V1    V2    V3    V4    V5    V6    V7    V8    V9    V10   V11   V12
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2000      1      1      0  315  0.8  1.5  0.54 10.00 4.55 999 1019.2
## 2: 2000      1      1      1  271  0.7  1.9  0.53 4.55  4.61 999 1020.3
## 3: 2000      1      1      2  232  2.3  3.1  0.52 4.76  4.78 999 1020.4
## 4: 2000      1      1      3  236  2.9  3.8  0.52 10.00 4.86 999 1021.0
## 5: 2000      1      1      4  232  4.1  4.9  0.50 10.00 5.00 999 1021.2
## ----
## 5108: 2000      7     31     19     59  3.3  3.8  0.61  9.09  4.68 999 1024.1
## 5109: 2000      7     31     20     45  3.9  4.7  0.59  9.09  4.94 999 1023.6
## 5110: 2000      7     31     21     56  3.8  4.5  0.53  8.33  4.71 999 1023.5
## 5111: 2000      7     31     22     63  4.3  5.1  0.56  8.33  4.94 999 1023.4
## 5112: 2000      7     31     23     56  4.2  5.0  0.61  8.33  5.20 999 1022.8
##      V13    V14    V15    V16
##      <num> <num> <num> <num>
## 1: 1.1  5.9 -3.6  99
## 2: 1.2  5.9 -3.6  99
## 3: 1.5  5.8 -3.3  99
## 4: 1.3  5.9 -3.6  99
## 5: 0.9  5.9 -4.0  99
## ----
## 5108: 17.2 17.6 16.0  99
## 5109: 17.2 17.6 16.0  99
## 5110: 17.2 17.6 15.9  99
## 5111: 17.2 17.6 16.0  99
## 5112: 17.2 17.6 16.0  99
##
## Year: 2001
##      YYYY    MM    DD    hh    WD  WSPD  GST  WVHT  DPD  APD  MWD  BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2001      1      1      0  255 13.2 16.4  1.49 4.76  4.30 999 1001.2
## 2: 2001      1      1      1  255 14.3 17.5  1.50 4.35  4.17 999 1002.0
## 3: 2001      1      1      2  263 15.8 19.9  1.68 4.76  4.31 999 1002.4
## 4: 2001      1      1      3  267 14.4 17.5  1.64 5.00  4.37 999 1003.6
## 5: 2001      1      1      4  270 13.9 17.6  1.55 4.76  4.21 999 1004.6
## ----
## 8756: 2001     12     31     19  248  9.3 11.1  0.67 3.45  3.21 999 1009.9
## 8757: 2001     12     31     20  242  8.9 10.7  0.69 3.23  3.15 999 1010.3
## 8758: 2001     12     31     21  240 10.5 99.0 99.00 99.00 99.00 999 9999.0
## 8759: 2001     12     31     22  244  8.6 99.0 99.00 99.00 99.00 999 9999.0
## 8760: 2001     12     31     23  244  8.4 11.3  0.77 3.57  3.31 999 1011.9
##      ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num>
## 1: -1.5  4.3 -7.6  99  99
## 2: -1.9  4.3 -7.1  99  99
## 3: -1.9  4.3 -7.3  99  99
## 4: -2.1  4.3 -7.2  99  99
## 5: -2.2  4.4 -8.3  99  99
## ----
## 8756: -0.3  7.0 -8.7  99  99
## 8757:  0.1  7.0 -8.9  99  99
## 8758: 999.0 999.0 999.0 99  99
## 8759: 999.0 999.0 999.0 99  99
## 8760:  0.1  6.7 -8.9  99  99
##
## Year: 2002
##      YYYY    MM    DD    hh    WD  WSPD  GST  WVHT  DPD  APD  MWD  BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2002      1      1      0  227  8.5 10.4  0.60 3.23  3.13 999 1012.9
## 2: 2002      1      1      1  234  9.5 11.5  0.66 3.13  3.09 999 1013.4
## 3: 2002      1      1      2  232  9.7 12.4  0.73 3.57  3.26 999 1013.9
## 4: 2002      1      1      3  255 10.5 12.5  0.80 3.70  3.37 999 1013.5
## 5: 2002      1      1      4  261 10.1 12.4  0.79 3.70  3.45 999 1013.4
## ----
## 8756: 2002     12     31     19  183  4.5  5.8  0.96 5.56  4.16 999 1015.0
## 8757: 2002     12     31     20  313  2.0  2.4  0.93 4.55  4.31 999 1014.6
## 8758: 2002     12     31     21  316  2.0  2.5  0.98 6.25  4.62 999 1014.7
## 8759: 2002     12     31     22  330  2.6  3.2  0.99 6.67  4.98 999 1014.3
## 8760: 2002     12     31     23  322  0.8  1.8  1.11 7.14  5.12 999 1013.6
##      ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num>
## 1:  0.0  6.7 -8.4  99  99
## 2:  0.0  6.7 -8.3  99  99
## 3: -0.5  6.7 -8.1  99  99
## 4: -0.4  6.7 -8.1  99  99
## 5: -0.4  6.7 -8.5  99  99
## ----
## 8756:  5.1  6.0  4.8  99  99
## 8757:  4.4  6.0  4.2  99  99
## 8758:  4.8  6.0  4.6  99  99
## 8759:  4.7  6.0  4.6  99  99
## 8760:  4.5  6.0  4.4  99  99

```

```

##
## Year: 2003
##      YYYY   MM   DD   hh   WD   WSPD   GST   WVHT   DPD   APD   MWD   BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2003     1     1     0   153   0.6   1.2   0.99   6.67   5.03   999  1012.8
## 2: 2003     1     1     1   183   3.4   3.8   0.93   6.67   4.92   999  1012.6
## 3: 2003     1     1     2   180   4.2   5.0   0.89   6.25   4.91   999  1011.8
## 4: 2003     1     1     3   207   6.4   7.4   0.80   6.67   4.89   999  1011.1
## 5: 2003     1     1     4   204   7.3   8.2   0.70   6.67   4.73   999  1010.3
## ----
## 8755: 2003    12    31    19   276   5.4   6.5   0.48   3.23   3.09   999  1019.0
## 8756: 2003    12    31    20   237   3.7   4.3   0.28   2.86   3.03   999  1018.9
## 8757: 2003    12    31    21   208   3.0   3.6   0.18   2.50   3.24   999  1018.1
## 8758: 2003    12    31    22   185   4.3   5.2   0.00   0.00   0.00   999  1017.4
## 8759: 2003    12    31    23   161   4.6   5.3   0.00   0.00   0.00   999  1016.6
##      ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num>
## 1: 4.7   6.0   4.6   99   99
## 2: 4.7   6.0   4.6   99   99
## 3: 5.0   6.0   4.9   99   99
## 4: 5.9   6.0   5.8   99   99
## 5: 6.0   6.0   5.3   99   99
## ----
## 8755: 5.5   5.2  -1.4   99   99
## 8756: 5.7   5.2   0.0   99   99
## 8757: 5.6   5.2   0.7   99   99
## 8758: 5.9   5.2   0.0   99   99
## 8759: 5.5   5.2  -0.3   99   99
##
## Year: 2004
##      YYYY   MM   DD   hh   WD   WSPD   GST   WVHT   DPD   APD   MWD   BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2004     1     1     0   184   8.6   10.5   0.17   2.50   3.03   999  1014.9
## 2: 2004     1     1     1   214   9.7   11.7   0.43   2.78   2.89   999  1014.2
## 3: 2004     1     1     2   227   9.9   12.2   99.00   99.00   99.00   999  1013.8
## 4: 2004     1     1     3   232   11.8   14.5   0.96   3.45   3.34   999  1013.0
## 5: 2004     1     1     4   232   9.2   11.3   1.00   3.57   3.43   999  1013.2
## ----
## 8757: 2004    12    31    19   153   7.5   8.8   0.96   4.35   3.85   999  1025.9
## 8758: 2004    12    31    20   165   6.2   7.4   0.96   4.76   3.92   999  1025.6
## 8759: 2004    12    31    21   172   6.4   7.2   0.96   4.35   4.00   999  1025.0
## 8760: 2004    12    31    22   175   8.1   9.9   0.87   4.76   3.91   999  1023.8
## 8761: 2004    12    31    23   176   9.2   10.4   0.88   4.17   3.69   999  1023.0
##      ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num>
## 1: 5.2   5.2  999.0   99   99
## 2: 5.1   5.2   0.0   99   99
## 3: 4.8   5.2  -0.8   99   99
## 4: 5.1   5.2  -0.2   99   99
## 5: 5.2   5.2  -0.7   99   99
## ----
## 8757: 6.3   6.3   4.9   99   99
## 8758: 6.6   6.3   5.4   99   99
## 8759: 7.4   6.3   5.9   99   99
## 8760: 7.4   6.3   6.3   99   99
## 8761: 7.4   6.3   6.7   99   99
##
## Year: 2005
##      YYYY   MM   DD   hh   mm   WD   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2005     1     1     0     0   187   9.0   10.1   0.85   3.23   3.58   999
## 2: 2005     1     1     1     0   193   8.3   10.5   0.78   3.85   3.57   999
## 3: 2005     1     1     2     0   212   7.0   8.9   0.90   3.13   3.50   999
## 4: 2005     1     1     3     0   210   8.8   11.2   1.00   4.17   3.70   999
## 5: 2005     1     1     4     0   237   6.8   8.0   1.00   3.33   3.79   999
## ----
## 8704: 2005    12    31    19     0   56   4.3   5.7   0.98   11.11   5.64   999
## 8705: 2005    12    31    20     0   56   3.4   4.5   1.06   10.00   5.49   999
## 8706: 2005    12    31    21     0   52   2.9   4.7   1.07   11.11   5.65   999
## 8707: 2005    12    31    22     0   59   5.1   6.7   1.03   11.11   5.49   999
## 8708: 2005    12    31    23     0   52   4.5   7.2   1.00   11.11   5.28   999
##      BAR   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1022.6   7.6   6.3   7.1   99   99
## 2: 1022.1   8.3   6.3   6.1   99   99
## 3: 1022.0   8.2   6.3   5.2   99   99
## 4: 1021.1   8.7   6.3   5.1   99   99
## 5: 1021.4   7.9   6.3   5.0   99   99
## ----
## 8704: 1011.0   0.4   5.8  999.0   99   99
## 8705: 1011.1   0.4   5.9  999.0   99   99
## 8706: 1011.6   0.8   5.9  -4.1   99   99
## 8707: 1011.1   1.1   5.9  -2.7   99   99
## 8708: 1011.4   1.4   5.8  -0.8   99   99

```



```

##
## Year: 2006
##      YYYY   MM   DD   hh   mm   WD   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2006     1     1     0     0    74   5.3   6.1   0.92 11.11 5.01 999
## 2: 2006     1     1     1     0    83   4.9   6.0   0.89 10.00 5.09 999
## 3: 2006     1     1     2     0    82   5.3   6.9   0.84 11.11 4.78 999
## 4: 2006     1     1     3     0    62   8.9  10.9   0.99 11.11 4.32 999
## 5: 2006     1     1     4     0    56   9.8  11.5   1.40 4.55 4.16 999
## ----
## 8719: 2006    12    31    19     0   305   4.5   6.0   0.57 4.55 3.49 999
## 8720: 2006    12    31    20     0   321   3.2   4.8   0.47 4.55 3.69 999
## 8721: 2006    12    31    21     0   276   3.1   5.0   0.40 4.35 4.09 999
## 8722: 2006    12    31    22     0   313   3.3   4.4   0.41 5.88 4.26 999
## 8723: 2006    12    31    23     0   303   2.8   3.7   0.39 5.56 4.30 999
##      BAR   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1011.8   0.6   5.8   -0.7   99   99
## 2: 1011.5   0.7   5.8   0.4    99   99
## 3: 1010.7   1.3   5.8   0.4    99   99
## 4: 1009.6   1.7   5.8   1.3    99   99
## 5: 1009.3   1.1   5.8   0.4    99   99
## ----
## 8719: 1028.8 2.2   7.1 999.0   99   99
## 8720: 1028.8 2.7   7.1 999.0   99   99
## 8721: 1028.9 3.2   7.1 999.0   99   99
## 8722: 1029.0 3.5   7.1 999.0   99   99
## 8723: 1028.9 3.8   7.1 999.0   99   99
##
## Year: 2007
##      #YY   MM   DD   hh   mm   WDIR   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2007     1     1     0     0   209   2.2   3.1   0.39 5.00 4.32 999
## 2: 2007     1     1     1     0   184   1.6   2.3   0.37 4.76 4.33 999
## 3: 2007     1     1     2     0   173   2.8   4.0   0.33 4.17 4.24 999
## 4: 2007     1     1     3     0   183   5.6   6.7   0.32 4.17 4.19 999
## 5: 2007     1     1     4     0   201   6.0   7.1   0.32 2.50 3.38 999
## ----
## 8690: 2007    12    31    19     0   271  11.7  13.9   1.47 7.69 4.75 999
## 8691: 2007    12    31    20     0   280  11.8  14.9   1.68 7.69 4.62 999
## 8692: 2007    12    31    21     0   271  12.8  16.1   1.58 8.33 4.49 999
## 8693: 2007    12    31    22     0   278  12.1  14.5   1.50 4.35 4.44 999
## 8694: 2007    12    31    23     0   272  12.7  15.5   1.42 4.35 4.29 999
##      PRES   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1029.0   3.6   7.1 999.0   99   99
## 2: 1028.8   3.5   7.1 999.0   99   99
## 3: 1028.9   3.6   7.1 999.0   99   99
## 4: 1028.3   3.1   7.1 999.0   99   99
## 5: 1028.7   2.8   7.1 999.0   99   99
## ----
## 8690: 1007.4 4.2   4.0   0.3    99   99
## 8691: 1008.9 4.4   4.3  -0.2    99   99
## 8692: 1010.6 4.7   4.3  -0.9    99   99
## 8693: 1012.2 4.7   4.4  -1.1    99   99
## 8694: 1013.7 4.3   4.6  -1.3    99   99
##
## Year: 2008
##      #YY   MM   DD   hh   mm   WDIR   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2008     1     1     0     0   274  11.6  14.1   1.40 4.17 4.17 999
## 2: 2008     1     1     1     0   282  10.6  12.9   1.23 4.17 4.02 999
## 3: 2008     1     1     2     0   284   9.5  11.5   1.05 4.00 3.99 999
## 4: 2008     1     1     3     0   282   7.3   8.7   0.85 3.45 3.79 999
## 5: 2008     1     1     4     0   268   4.9   6.0   0.64 7.69 4.09 999
## ----
## 8741: 2008    12    31    18    50    16  14.4  16.9   2.33 5.88 5.01 999
## 8742: 2008    12    31    19    50    19  14.5  16.9   2.67 6.25 5.26 999
## 8743: 2008    12    31    20    50     4  13.6  16.2   3.07 6.67 5.68 999
## 8744: 2008    12    31    21    50   335  13.5  16.2   2.53 7.14 5.27 999
## 8745: 2008    12    31    22    50   329  13.7  16.4   2.43 7.14 5.24 999
##      PRES   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1015.3   4.0   4.7  -1.6    99   99
## 2: 1016.4   3.6   4.7  -1.7    99   99
## 3: 1017.8   3.3   4.8  -1.6    99   99
## 4: 1018.9   3.2   4.8  -1.7    99   99
## 5: 1019.5   2.8   4.8  -1.4    99   99
## ----
## 8741: 996.8  -1.9   5.6  -2.2    99   99
## 8742: 997.2  -3.0   5.6  -3.2    99   99
## 8743: 997.9  -2.9   5.6  -4.1    99   99
## 8744: 1000.0 -4.4   5.6  -5.2    99   99
## 8745: 1001.3 -4.9   5.6  -5.9    99   99

```

```

##
## Year: 2009
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2008    12    31    23    50    326    14.4    17.3    2.52    7.14    5.27    999
## 2: 2009     1     1     0    50    316    16.7    19.7    2.65    7.14    5.05    999
## 3: 2009     1     1     1    50    307    15.7    19.0    3.01    6.25    5.27    999
## 4: 2009     1     1     2    50    315    17.0    20.7    2.65    5.88    5.19    999
## 5: 2009     1     1     3    50    315    16.5    20.8    3.05    5.56    5.34    999
## ----
## 8728: 2009    12    31    18    50    274    4.2    5.7    0.42    11.43    3.61    999
## 8729: 2009    12    31    19    50    258    3.6    4.7    0.39    11.43    3.38    999
## 8730: 2009    12    31    20    50    55    0.4    1.3    0.35    10.81    4.14    999
## 8731: 2009    12    31    21    50    339    1.3    2.2    0.34    12.12    5.39    999
## 8732: 2009    12    31    22    50    15    0.7    1.7    0.35    12.12    5.42    999
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1002.4   -5.3    5.6   -6.8    99    99
## 2: 1003.2   -7.7    5.6   -9.6    99    99
## 3: 1003.9   -8.7    5.6  -12.0    99    99
## 4: 1004.8  -10.1    5.5  -13.2    99    99
## 5: 1005.5  -10.6    5.5  -13.2    99    99
## ----
## 8728: 1021.8  -0.8    6.0   -1.6    99    99
## 8729: 1022.1  -0.8    6.0   -1.4    99    99
## 8730: 1021.0  -0.5    5.9   -1.1    99    99
## 8731: 1021.2  -0.2    5.9   -0.9    99    99
## 8732: 1020.8   0.5    5.9    0.3    99    99
##
## Year: 2010
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2009    12    31    23    50    37    1.2    2.0    0.35    12.12    5.43    999
## 2: 2010     1     1     0    50    32    2.5    3.5    0.35    12.12    5.02    999
## 3: 2010     1     1     1    50     2    4.1    5.1    0.38    12.90    5.19    999
## 4: 2010     1     1     2    50     4    4.3    5.5    0.38    12.12    4.94    999
## 5: 2010     1     1     3    50   355    5.4    6.5    0.41    13.79    3.62    999
## ----
## 7840: 2010    12    31    18    50   216    2.2    2.4    0.18    99.00    3.21    999
## 7841: 2010    12    31    19    50   221    4.0    4.5    0.17    99.00    4.11    999
## 7842: 2010    12    31    20    50   203    2.8    3.3    0.17    99.00    3.85    999
## 7843: 2010    12    31    21    50   190    4.1    4.6    0.16    99.00    3.85    999
## 7844: 2010    12    31    22    50   213    3.7    4.2    0.17    99.00    3.77    999
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1020.0    1.0    5.9  -0.2    99    99
## 2: 1019.4    1.5    6.0  -0.6    99    99
## 3: 1018.4    1.4    6.0  -0.7    99    99
## 4: 1017.8    1.1    6.0  -0.8    99    99
## 5: 1016.8    0.8    6.1  -0.6    99    99
## ----
## 7840: 1018.4    7.2    6.5    3.2    99    99
## 7841: 1018.6    7.5    6.5    3.0    99    99
## 7842: 1018.6    7.4    6.4    3.8    99    99
## 7843: 1018.3    7.0    6.3    4.0    99    99
## 7844: 1018.5    7.0    6.2    3.5    99    99
##
## Year: 2011
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2010    12    31    23    50   225    3.8    4.2    0.16    99.00    4.05    999
## 2: 2011     1     1     0    50   234    4.9    5.7    0.19    99.00    2.74    999
## 3: 2011     1     1     1    50   234    5.8    7.1    0.25    99.00    2.56    999
## 4: 2011     1     1     2    50   233    5.7    6.8    0.39    2.47    2.58    999
## 5: 2011     1     1     3    50   227    6.4    7.2    0.43    2.47    2.57    999
## ----
## 8742: 2011    12    31    18    50   180    0.0    0.1    99.00    99.00    99.00    999
## 8743: 2011    12    31    19    50   281    2.4    3.8    99.00    99.00    99.00    999
## 8744: 2011    12    31    20    50   287    2.4    3.7    99.00    99.00    99.00    999
## 8745: 2011    12    31    21    50   286    2.8    4.5    99.00    99.00    99.00    999
## 8746: 2011    12    31    22    50   289    2.6    3.7    99.00    99.00    99.00    999
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1018.7    6.8    6.2    3.5    99    99
## 2: 1018.5    6.4    6.2    2.5    99    99
## 3: 1018.3    6.1    6.1    2.3    99    99
## 4: 1018.0    5.8    6.1    1.7    99    99
## 5: 1017.8    5.7    6.1    1.3    99    99
## ----
## 8742: 1008.4    4.9    5.7    4.2    99    99
## 8743: 1008.0    5.4    6.1    4.3    99    99
## 8744: 1008.1    5.7    9.1    4.2    99    99
## 8745: 1008.9    5.7    7.4    4.3    99    99
## 8746: 1009.5    5.6    6.4    4.8    99    99

```

```

##
## Year: 2012
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2012     6    30    23    50    253    3.4    4.2    0.52    9.09    5.33    86
## 2: 2012     7     1     0    50    198    3.5    4.1    0.53    7.69    5.41    107
## 3: 2012     7     1     1    50    199    4.0    4.7    0.48    10.00    5.60    102
## 4: 2012     7     1     2    50    218    3.9    4.4    0.45    9.09    5.20    87
## 5: 2012     7     1     3    50    222    4.5    4.8    0.41    7.69    4.68    100
## ----
## 4405: 2012    12    31    18    50    277    11.6    14.2    0.95    4.00    3.61    258
## 4406: 2012    12    31    19    50    271    10.9    13.3    0.90    4.17    3.54    266
## 4407: 2012    12    31    20    50    274    9.6    11.1    0.91    3.85    3.60    273
## 4408: 2012    12    31    21    50    277    10.0    12.2    0.84    3.70    3.53    267
## 4409: 2012    12    31    22    50    257    7.4    9.7    0.65    3.70    3.36    279
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1005.4    23.2    18.2    15.7    99    99
## 2: 1005.7    22.0    18.2    16.8    99    99
## 3: 1006.1    21.6    18.1    17.8    99    99
## 4: 1006.1    21.6    18.0    17.7    99    99
## 5: 1006.5    21.5    17.7    17.8    99    99
## ----
## 4405: 1012.2    1.6    7.7    -3.6    99    99
## 4406: 1012.2    1.3    7.8    -3.9    99    99
## 4407: 1012.3    1.6    7.8    -3.8    99    99
## 4408: 1012.1    2.0    7.8    -3.7    99    99
## 4409: 1011.5    2.0    7.8    -4.1    99    99
##
## Year: 2013
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2013    12    31    23    50    234    8.5    10.2    0.42    3.33    3.14    279
## 2: 2013     1     1     0    50    246    9.0    10.9    0.52    2.86    2.94    251
## 3: 2013     1     1     1    50    243    7.3    9.4    0.50    3.33    3.05    237
## 4: 2013     1     1     2    50    252    10.5    12.4    0.50    3.03    2.99    244
## 5: 2013     1     1     3    50    256    10.9    13.0    0.65    3.70    3.28    265
## ----
## 8205: 2013    12    31    18    50    267    5.1    7.1    0.59    10.81    4.03    81
## 8206: 2013    12    31    19    50    276    4.4    6.9    0.57    10.00    4.33    86
## 8207: 2013    12    31    20    50    278    5.6    7.2    0.55    10.00    4.48    97
## 8208: 2013    12    31    21    50    254    6.7    9.2    0.52    10.81    4.59    67
## 8209: 2013    12    31    22    50    257    8.4    11.0    0.65    10.00    3.79    79
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1011.6    1.5    7.7    -3.7    99    99
## 2: 1010.8    1.5    7.7    -4.1    99    99
## 3: 1010.0    1.8    7.7    -4.0    99    99
## 4: 1009.0    2.4    7.7    -3.8    99    99
## 5: 1008.1    2.6    7.7    -3.8    99    99
## ----
## 8205: 1017.5   -5.8    5.9   -14.8    99    99
## 8206: 1017.4   -4.8    5.8   -14.6    99    99
## 8207: 1018.2   -3.9    5.8   -13.3    99    99
## 8208: 1018.6   -2.8    5.7   -12.0    99    99
## 8209: 1019.3   -2.0    5.8   -10.0    99    99
##
## Year: 2014
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2014    12    31    23    50    255    6.5    10.1    0.66    3.45    3.54    258
## 2: 2014     1     1     0    50    246    7.4    10.1    0.63    3.23    3.56    264
## 3: 2014     1     1     1    50    246    9.7    11.7    0.55    3.13    3.33    276
## 4: 2014     1     1     2    50    275    11.1    14.5    0.78    3.45    3.43    270
## 5: 2014     1     1     3    50    277    10.7    15.2    0.94    3.85    3.46    262
## ----
## 8749: 2014    12    31    18    50    289    6.1    8.6    0.38    2.86    2.87    288
## 8750: 2014    12    31    19    50    303    5.6    8.4    0.48    3.23    3.03    273
## 8751: 2014    12    31    20    50    299    5.1    7.8    0.50    3.23    3.04    285
## 8752: 2014    12    31    21    50    298    4.3    6.9    0.46    3.33    3.04    286
## 8753: 2014    12    31    22    50    282    5.7    8.0    0.45    3.23    3.04    287
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1019.2   -2.1    5.8    -9.6    99    99
## 2: 1019.2   -2.2    5.8    -8.4    99    99
## 3: 1019.8   -1.9    5.9    -7.3    99    99
## 4: 1019.6   -1.7    5.9    -8.3    99    99
## 5: 1020.2   -2.1    5.9    -9.4    99    99
## ----
## 8749: 1022.9   -2.1    5.5  999.0    99    99
## 8750: 1023.1   -2.1    5.5  999.0    99    99
## 8751: 1023.2   -1.8    5.6  999.0    99    99
## 8752: 1023.0   -2.1    5.7  999.0    99    99
## 8753: 1023.2   -1.9    5.7  999.0    99    99

```

```

##
## Year: 2015
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2014    12    31    23    50    287    4.9    8.3    0.44  3.23  3.06  281
## 2: 2015     1     1     0    50    280    4.8    7.7    0.39  3.03  2.91  283
## 3: 2015     1     1     1    50    275    4.1    5.4    0.35  2.86  2.98  278
## 4: 2015     1     1     2    50    236    5.3    6.9    0.27  2.86  2.82  277
## 5: 2015     1     1     3    50    220    4.8    6.9    0.20  99.00  2.77  999
## ----
## 8745: 2015    12    31    18    50    298    7.6    8.8    1.23  10.00  5.78   93
## 8746: 2015    12    31    19    50    310    6.4    8.1    1.23  10.00  5.43  100
## 8747: 2015    12    31    20    50    284    7.7    9.8    1.22  10.81  5.55   74
## 8748: 2015    12    31    21    50    280    8.8    10.6    1.25  10.00  5.28   94
## 8749: 2015    12    31    22    50    278    10.2   12.1    1.29  10.00  5.24   81
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1022.9   -2.3    5.7  999.0    99    99
## 2: 1022.7   -2.3    5.7  999.0    99    99
## 3: 1022.2   -2.5    5.7  999.0    99    99
## 4: 1021.9   -2.3    5.6  999.0    99    99
## 5: 1021.2   -2.7    5.6  999.0    99    99
## ----
## 8745: 1013.2    7.2    8.7    3.7    99    99
## 8746: 1013.4    6.8    8.7    3.4    99    99
## 8747: 1014.1    7.0    8.7    2.5    99    99
## 8748: 1014.8    6.5    8.6    1.7    99    99
## 8749: 1014.7    6.5    8.6    1.1    99    99
##
## Year: 2016
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2015    12    31    23    50    280    8.8    10.6    1.06  10.00  4.83   83
## 2: 2016     1     1     0    50    275    9.9    12.0    1.01  10.00  4.60   85
## 3: 2016     1     1     1    50    266    8.9    10.4    1.09  10.00  4.49   83
## 4: 2016     1     1     2    50    274    9.3    10.7    1.04  10.00  4.42   81
## 5: 2016     1     1     3    50    279    9.8    11.5    1.08  9.09  4.56   87
## ----
## 8691: 2016    12    31    18    50    191    7.5    9.1    0.52  10.81  3.31   56
## 8692: 2016    12    31    19    50    188    7.5    9.5    0.58  10.81  3.30  336
## 8693: 2016    12    31    20    50    182    7.6    9.3    0.57  11.43  3.41  320
## 8694: 2016    12    31    21    50    174    9.1    11.4    0.71  10.81  3.52   80
## 8695: 2016    12    31    22    50    175    8.8    10.2    0.74  4.00  3.60  134
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1015.1    6.4    8.6    0.3    99    99
## 2: 1015.2    6.3    8.5   -0.4    99    99
## 3: 1015.4    6.0    8.5    0.3    99    99
## 4: 1015.3    5.7    8.5   -0.3    99    99
## 5: 1015.3    5.5    8.4   -0.4    99    99
## ----
## 8691: 1017.1    2.0    8.2  999.0    99    99
## 8692: 1016.8    2.4    8.2  999.0    99    99
## 8693: 1016.3    3.1    8.2  999.0    99    99
## 8694: 1015.4    3.7    8.1  999.0    99    99
## 8695: 1015.1    4.2    8.1  999.0    99    99
##
## Year: 2017
##      #YY    MM    DD    hh    mm    WDIR    WSPD    GST    WVHT    DPD    APD    MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2016    12    31    23    50    177    9.1    10.7    0.82  10.81  3.84   93
## 2: 2017     1     1     0    50    177    7.3    8.8    0.87  10.81  3.94   75
## 3: 2017     1     1     1    50    174    7.4    8.7    0.85  4.00  3.95  132
## 4: 2017     1     1     2    50    186    8.6    10.7    0.85  4.35  3.92  135
## 5: 2017     1     1     3    50    207    7.9    10.0    0.94  12.12  3.90  126
## ----
## 8692: 2017    12    31    18    50    297    12.4   15.0    1.22  4.55  3.81  306
## 8693: 2017    12    31    19    50    294    12.6   15.7    1.15  4.35  3.81  312
## 8694: 2017    12    31    20    50    294    11.8   16.8    1.29  4.55  3.89  302
## 8695: 2017    12    31    21    50    293    12.8   17.0    1.36  4.55  3.97  299
## 8696: 2017    12    31    22    50    298    12.0   15.1    1.26  4.76  3.91  301
##      PRES    ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1014.5    5.3    8.1  999    99    99
## 2: 1013.7    6.0    8.1  999    99    99
## 3: 1012.7    7.0    8.2  999    99    99
## 4: 1011.8    7.6    8.2  999    99    99
## 5: 1010.8    7.2    8.2  999    99    99
## ----
## 8692: 1017.4   -9.7    6.5  999    99    99
## 8693: 1018.5   -9.5    6.5  999    99    99
## 8694: 1019.7   -9.3    6.5  999    99    99
## 8695: 1019.7   -9.2    6.5  999    99    99
## 8696: 1020.3   -9.4    6.5  999    99    99

```

```

##
## Year: 2018
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##  1: 2017    12    31    23    50   302  13.3  16.7  1.19  4.35  3.76  301
##  2: 2018     1     1     0    50   294  11.5  15.0  1.30  4.76  3.97  301
##  3: 2018     1     1     1    50   295  12.0  15.3  1.25  4.35  3.84  304
##  4: 2018     1     1     2    50   305  10.5  14.2  1.18  4.17  3.74  312
##  5: 2018     1     1     3    50   314  11.8  14.2  1.14  3.85  3.65  319
##  ---
## 8656: 2018    12    31    18    50   157  4.5  5.1  0.44 13.79  4.54  74
## 8657: 2018    12    31    19    50   155  5.7  7.0  0.43 14.81  3.84  78
## 8658: 2018    12    31    20    50   168  8.4  9.5  0.55 13.79  3.63 169
## 8659: 2018    12    31    21    50   165  8.3  9.7  0.71  3.57  3.70 140
## 8660: 2018    12    31    22    50   157  7.9  9.6  0.67  3.85  3.59 137
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##  1: 1020.6 -10.3  6.5 999.0  99  99
##  2: 1020.9 -10.3  6.5 999.0  99  99
##  3: 1020.8 -11.1  6.5 999.0  99  99
##  4: 1021.1 -11.8  6.5 999.0  99  99
##  5: 1021.1 -12.2  6.5 999.0  99  99
##  ---
## 8656: 1026.4  5.7  7.0  0.2  99  99
## 8657: 1025.7  6.0  7.0  1.1  99  99
## 8658: 1024.8  5.9  7.0 -0.4  99  99
## 8659: 1024.6  5.6  7.0 -0.2  99  99
## 8660: 1024.9  5.3  7.0 -0.5  99  99
##
## Year: 2019
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##  1: 2019     1     1     0    50   158  9.6  11.5  0.81  4.00  3.77  135
##  2: 2019     1     1     1    50   136  10.6  12.3  0.99  4.35  3.95  131
##  3: 2019     1     1     2    50   143  11.1  13.3  1.22  4.76  4.18  130
##  4: 2019     1     1     3    50   139  12.3  14.6  1.31  5.00  4.15  131
##  5: 2019     1     1     4    50   133  12.3  15.6  1.41  5.00  4.31  134
##  ---
## 8609: 2019    12    31    18    50   330  6.9  8.4  3.45 10.00  7.47  99
## 8610: 2019    12    31    19    50   329  5.6  7.2  3.26 10.00  7.57 100
## 8611: 2019    12    31    20    50   294  4.0  5.6  3.00 10.81  7.62  90
## 8612: 2019    12    31    21    50   328  3.8  5.2  2.52 10.00  7.34 103
## 8613: 2019    12    31    22    50   298  6.3  8.8  2.83 10.00  8.00  96
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##  1: 1023.7  3.6  7.0  1.5  99  99
##  2: 1021.0  4.1  7.0  1.7  99  99
##  3: 1019.3  4.1  7.0  2.6  99  99
##  4: 1017.3  4.2  7.0  3.3  99  99
##  5: 1014.8  5.0  7.0  4.4  99  99
##  ---
## 8609: 999.3  3.1  7.1  3.1  99  99
## 8610: 999.5  3.2  7.1  3.2  99  99
## 8611: 1000.4  3.1  7.1  3.1  99  99
## 8612: 999.6  2.9  7.0  2.7  99  99
## 8613: 1000.4  3.2  6.9  2.3  99  99
##
## Year: 2020
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##  1: 2019    12    31    23    50   295  5.4  7.0  2.48 10.00  7.51  94
##  2: 2020     1     1     0    50   276  5.3  6.9  2.46 10.00  7.61 103
##  3: 2020     1     1     1    50   257  7.1  9.3  2.09 10.00  7.03  91
##  4: 2020     1     1     2    50   247  7.7  10.0  2.17 10.81  6.89  77
##  5: 2020     1     1     3    50   242  7.8  10.0  2.32 10.00  7.45  80
##  ---
## 16099: 2020    12    31    23    10   300  8.0  9.8 99.00 99.00 99.00 999
## 16100: 2020    12    31    23    20   300  6.9  8.5 99.00 99.00 99.00 999
## 16101: 2020    12    31    23    30   301  7.1  9.2 99.00 99.00 99.00 999
## 16102: 2020    12    31    23    40   300  7.7  10.0  0.63  3.33  3.30 304
## 16103: 2020    12    31    23    50   300  8.1  10.0 99.00 99.00 99.00 999
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##  1: 1000.3  3.0  6.9  2.7  99  99
##  2: 1000.4  3.4  6.9  2.6  99  99
##  3: 1000.5  3.6  6.9  2.7  99  99
##  4: 999.9   3.9  6.8  2.9  99  99
##  5: 999.6   4.3  6.8  2.9  99  99
##  ---
## 16099: 1022.9  5.3  7.3 -2.9  99  99
## 16100: 1023.1  5.4  7.3 -2.3  99  99
## 16101: 1023.1  5.3  7.3 -2.5  99  99
## 16102: 1023.4  5.2  7.3 -2.6  99  99
## 16103: 1023.8  5.2  7.3 -2.7  99  99

```

```
##
## Year: 2021
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2021      1      1      0      0  302   7.9   9.8  99.00 99.00 99.00 999
## 2: 2021      1      1      0     10  301   7.8  10.1  99.00 99.00 99.00 999
## 3: 2021      1      1      0     20  301   8.1  10.1  99.00 99.00 99.00 999
## 4: 2021      1      1      0     30  305   7.3   9.0  99.00 99.00 99.00 999
## 5: 2021      1      1      0     40  302   7.2   9.4   0.57  3.45  3.22 294
## ---
## 51559: 2021     12     31     23     10  160   1.8   2.4  99.00 99.00 99.00 999
## 51560: 2021     12     31     23     20  174   2.0   2.5  99.00 99.00 99.00 999
## 51561: 2021     12     31     23     30  201   2.4   3.0  99.00 99.00 99.00 999
## 51562: 2021     12     31     23     40  204   2.4   2.9   0.43  10.00  5.98 111
## 51563: 2021     12     31     23     50  221   2.4   3.3  99.00 99.00 99.00 999
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1024.1   5.2   7.4  -3.0   99   99
## 2: 1024.2   5.1   7.4  -3.0   99   99
## 3: 1024.4   5.1   7.4  -2.8   99   99
## 4: 1024.6   5.1   7.3  -2.8   99   99
## 5: 1024.7   5.0   7.3  -2.9   99   99
## ---
## 51559: 1015.0 999.0   8.5 999.0   99   99
## 51560: 1015.0 999.0   8.5 999.0   99   99
## 51561: 1015.5 999.0   8.5 999.0   99   99
## 51562: 1015.6 999.0   8.5 999.0   99   99
## 51563: 1015.8 999.0   8.5 999.0   99   99
##
## Year: 2022
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2022      1      1      0      0  239   2.5   3.2  99.00 99.00 99.00 999
## 2: 2022      1      1      0     10  235   1.9   2.8  99.00 99.00 99.00 999
## 3: 2022      1      1      0     20  207   1.6   2.4  99.00 99.00 99.00 999
## 4: 2022      1      1      0     30  183   1.3   1.7  99.00 99.00 99.00 999
## 5: 2022      1      1      0     40  176   1.5   2.1   0.40  9.09  6.19 137
## ---
## 52525: 2022     12     31     23     10  999   4.1   4.9  99.00 99.00 99.00 999
## 52526: 2022     12     31     23     20  999   3.9   4.5  99.00 99.00 99.00 999
## 52527: 2022     12     31     23     30  999   4.1   4.5  99.00 99.00 99.00 999
## 52528: 2022     12     31     23     40  999   4.1   4.5   0.43  10.00  3.36  71
## 52529: 2022     12     31     23     50  999   4.0   5.1   0.41  10.00  3.33  68
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1015.7   999   8.5   999   99   99
## 2: 1015.7   999   8.5   999   99   99
## 3: 1015.7   999   8.5   999   99   99
## 4: 1015.5   999   8.5   999   99   99
## 5: 1015.5   999   8.5   999   99   99
## ---
## 52525: 1011.5   999   7.6   999   99   99
## 52526: 1011.4   999   7.6   999   99   99
## 52527: 1011.1   999   7.6   999   99   99
## 52528: 1011.1   999   7.6   999   99   99
## 52529: 1011.0   999   7.6   999   99   99
##
## Year: 2023
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2023      1      1      0      0  999   4.3   5.0  99.00 99.00 99.00 999
## 2: 2023      1      1      0     10  999   4.5   5.4  99.00 99.00 99.00 999
## 3: 2023      1      1      0     20  999   4.2   4.8  99.00 99.00 99.00 999
## 4: 2023      1      1      0     30  999   4.2   4.8  99.00 99.00 99.00 999
## 5: 2023      1      1      0     40  999   3.9   4.3   0.41  9.09  3.43 112
## ---
## 52476: 2023     12     31     23     10  340   4.9   6.2   0.43  10.81  4.96  76
## 52477: 2023     12     31     23     20  332   5.0   6.0  99.00 99.00 99.00 999
## 52478: 2023     12     31     23     30  331   5.2   6.4  99.00 99.00 99.00 999
## 52479: 2023     12     31     23     40  337   5.2   6.9   0.50  10.00  3.73  99
## 52480: 2023     12     31     23     50  335   5.1   6.7  99.00 99.00 99.00 999
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1010.8 999.0   7.6 999.0   99   99
## 2: 1010.6 999.0   7.6 999.0   99   99
## 3: 1010.2 999.0 999.0 999.0   99   99
## 4: 1010.0 999.0   7.6 999.0   99   99
## 5: 1009.8 999.0   7.6 999.0   99   99
## ---
## 52476: 1014.2   3.6   7.3  -2.5   99   99
## 52477: 1014.3   3.3   7.3  -3.0   99   99
## 52478: 1014.4   3.2   7.3  -3.1   99   99
## 52479: 1014.4   3.1   7.3  -3.0   99   99
## 52480: 1014.6   3.0   7.2  -3.2   99   99
```

```

## [[1]]
##      YY      MM      DD      hh      WD  WSPD  GST  WVHT  DPD  APD  MWD  BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1:    85     1     1     0     60     4     5     99     99     99    999 1030.3
##  2:    85     1     1     1     80     4     5     99     99     99    999 1030.0
##  3:    85     1     1     2    100     4     5     99     99     99    999 1030.1
##  4:    85     1     1     3    100     4     5     99     99     99    999 1029.4
##  5:    85     1     1     4    110     4     5     99     99     99    999 1028.6
## ----
## 8715:    85    12    31    19    200    10    13     99     99     99    999 1008.5
## 8716:    85    12    31    20    200    11    15     99     99     99    999 1008.0
## 8717:    85    12    31    21    200    10    12     99     99     99    999 1008.7
## 8718:    85    12    31    22    210     9    12     99     99     99    999 1009.0
## 8719:    85    12    31    23    210     8    10     99     99     99    999 1009.1
##      ATMP  WTMP  DEWP  VIS
##      <num> <num> <num> <num>
##  1:    4.7    6.7    999    99
##  2:    5.1    6.7    999    99
##  3:    5.6    6.6    999    99
##  4:    5.8    6.7    999    99
##  5:    5.8    6.7    999    99
## ----
## 8715:    7.5    4.6    999    99
## 8716:    7.9    4.7    999    99
## 8717:    7.4    4.8    999    99
## 8718:    7.2    4.9    999    99
## 8719:    6.7    4.4    999    99
##
## [[2]]
##      YY      MM      DD      hh      WD  WSPD  GST  WVHT  DPD  APD  MWD  BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1:    86     1     1     0    210     9    11    99.0  99.0  99.0  999 1009.2
##  2:    86     1     1     1    210     9    10    99.0  99.0  99.0  999 1009.3
##  3:    86     1     1     2    220     8    10    99.0  99.0  99.0  999 1009.2
##  4:    86     1     1     3    220     6     8    99.0  99.0  99.0  999 1009.3
##  5:    86     1     1     4    210     6     8    99.0  99.0  99.0  999 1009.0
## ----
## 8164:    86    12    31    19    320     8    10     3.0  11.1  8.3  999 1017.5
## 8165:    86    12    31    20    350     8     9     2.9  11.1  8.2  999 1018.8
## 8166:    86    12    31    21    320     9    11     2.7  11.1  8.4  999 1019.6
## 8167:    86    12    31    22    320     8    10     2.7  11.1  8.6  999 1021.0
## 8168:    86    12    31    23    290     7     8     2.9  11.1  8.7  999 1022.5
##      ATMP  WTMP  DEWP  VIS
##      <num> <num> <num> <num>
##  1:    5.8    4.3    999    99
##  2:    4.7    4.3    999    99
##  3:    4.0    4.3    999    99
##  4:    3.9    4.3    999    99
##  5:    3.9    4.3    999    99
## ----
## 8164:    4.0    6.2    999    99
## 8165:    4.3    6.2    999    99
## 8166:    4.4    5.9    999    99
## 8167:    3.9    5.9    999    99
## 8168:    3.2    5.9    999    99
##
## [[3]]
##      YY      MM      DD      hh      WD  WSPD  GST  WVHT  DPD  APD  MWD  BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1:    87     1     1     0    290     8.0  10.0  2.7  11.1  8.6  999 1023.5
##  2:    87     1     1     1    290     7.0  8.0  2.4  10.0  8.0  999 1024.3
##  3:    87     1     1     2    290     6.0  8.0  2.5  11.1  8.3  999 1023.8
##  4:    87     1     1     3    300     6.0  7.0  2.6  11.1  8.6  999 1024.1
##  5:    87     1     1     4    290     5.0  6.0  2.7  12.5  8.7  999 1025.2
## ----
## 7598:    87    12    31    19    177     8.6  10.1  0.4  11.1  4.7  999 1023.4
## 7599:    87    12    31    20    195     7.9  9.3  0.5  11.1  4.3  999 1023.6
## 7600:    87    12    31    21    193     7.6  9.0  0.4  10.0  4.1  999 1022.3
## 7601:    87    12    31    22    223     6.7  8.0  0.4  10.0  4.1  999 1022.1
## 7602:    87    12    31    23    225     5.0  6.0  0.3  12.5  4.4  999 1021.3
##      ATMP  WTMP  DEWP  VIS
##      <num> <num> <num> <num>
##  1:    2.8    5.9    999    99
##  2:    2.0    5.9    999    99
##  3:    1.6    5.9    999    99
##  4:    1.3    6.0    999    99
##  5:    1.0    5.9    999    99
## ----
## 7598:    0.5    5.1    999    99
## 7599:    0.1    5.1    999    99
## 7600:    0.9    5.1    999    99
## 7601:    1.6    5.1    999    99
## 7602:    1.6    5.1    999    99
##

```

```
## [[4]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    88      1      1      1    191    5.7    6.7    0.3    14.3    4.7    999 1020.1
## 2:    88      1      1      2    182    8.0    9.3    0.4    3.6    3.8    999 1018.9
## 3:    88      1      1      3    196    8.1    10.3    0.4    3.0    3.5    999 1019.0
## 4:    88      1      1      4    193    7.8    8.7    0.4    2.9    3.4    999 1019.0
## 5:    88      1      1      5    182    6.9    8.9    0.3    2.6    3.7    999 1018.9
## ----
## 8067:    88     12     31     19    259    8.8    11.5    0.4    3.3    3.4    999 1013.9
## 8068:    88     12     31     20    267    8.5    10.2    0.5    3.6    3.5    999 1014.7
## 8069:    88     12     31     21    277    9.7    12.2    0.6    3.4    3.5    999 1015.5
## 8070:    88     12     31     22    291    9.6    12.6    0.4    3.6    3.5    999 1016.4
## 8071:    88     12     31     23    284    7.1    8.8    0.3    3.1    3.3    999 1017.9
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.9    5.1    999    99
## 2:    4.6    5.1    999    99
## 3:    4.7    5.1    999    99
## 4:    4.4    5.1    999    99
## 5:    4.3    5.1    999    99
## ----
## 8067:    4.4    4.7    999    99
## 8068:    4.7    4.7    999    99
## 8069:    4.3    4.7    999    99
## 8070:    3.6    4.7    999    99
## 8071:    3.3    4.7    999    99
##
## [[5]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    89      1      1      0    309    8.5    9.8    0.2    2.9    3.3    999 1018.6
## 2:    89      1      1      1    329    9.0    11.2    0.3    2.9    3.2    999 1020.1
## 3:    89      1      1      2    326    7.4    9.9    0.3    3.1    3.4    999 1022.3
## 4:    89      1      1      3    340    8.2    11.4    0.2    3.0    3.5    999 1022.5
## 5:    89      1      1      4    349    9.6    11.4    0.3    3.2    3.4    999 1022.5
## ----
## 7929:    89     12     31     19    158    7.1    8.2    1.0    6.2    5.3    999 1013.9
## 7930:    89     12     31     20    163    7.0    8.2    1.1    7.1    5.4    999 1012.7
## 7931:    89     12     31     21    160    7.3    8.2    1.0    6.7    5.5    999 1011.4
## 7932:    89     12     31     22    150    7.3    8.1    1.0    7.1    5.6    999 1009.6
## 7933:    89     12     31     23    159    7.5    8.4    1.0    7.1    5.6    999 1008.0
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    2.8    4.7    999    99
## 2:    1.7    4.7    999    99
## 3:    1.1    4.7    999    99
## 4:    0.2    4.7    999    99
## 5:   -0.7    4.7    999    99
## ----
## 7929:    3.4    2.9    999    99
## 7930:    3.2    2.9    999    99
## 7931:    3.7    2.9    999    99
## 7932:    4.4    3.2    999    99
## 7933:    3.9    3.2    999    99
##
## [[6]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    90      1      1      0    149    9.5    10.8    1.1    7.1    5.5    999 1004.9
## 2:    90      1      1      1    149    9.9    11.6    1.2    7.1    5.5    999 1003.1
## 3:    90      1      1      2    182    7.8    9.7    1.1    7.1    5.4    999 1001.8
## 4:    90      1      1      3    200    9.5    10.9    1.0    7.1    5.4    999 1000.5
## 5:    90      1      1      4    199    9.9    11.8    1.1    7.1    5.5    999 999.6
## ----
## 8699:    90     12     31     19    337    9.6    12.4    0.7    10.0    4.4    999 1023.4
## 8700:    90     12     31     20    322    10.3    12.8    0.8    6.2    4.7    999 1024.9
## 8701:    90     12     31     21    325    8.4    10.9    0.7    11.1    4.9    999 1026.1
## 8702:    90     12     31     22    327    9.7    12.4    0.7    6.2    4.9    999 1027.2
## 8703:    90     12     31     23    326    9.0    12.0    0.7    7.1    5.2    999 1028.6
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    4.3    3.3    999    99
## 2:    5.4    3.3    999    99
## 3:    7.0    3.2    999    99
## 4:    8.8    3.2    999    99
## 5:    8.6    3.2    999    99
## ----
## 8699:    0.0    6.4    999    99
## 8700:   -0.5    6.4    999    99
## 8701:   -1.0    6.4    999    99
## 8702:   -2.1    6.4    999    99
## 8703:   -2.6    6.4    999    99
##
```



```
## [[7]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    91      1      1      0    322    10.6    12.8    0.8    7.7    5.0    999 1029.7
## 2:    91      1      1      1    343     8.7    10.9    0.8    5.9    5.1    999 1031.1
## 3:    91      1      1      2    336     7.3    10.7    0.7    7.1    5.0    999 1031.7
## 4:    91      1      1      3    328     9.1    11.2    0.7    7.1    5.2    999 1031.8
## 5:    91      1      1      4    334    10.6    12.3    0.8    6.7    4.7    999 1032.6
## ----
## 8726:   91     12     31     19    285     3.4     5.0     2.0    10.0     7.8    999 1035.0
## 8727:   91     12     31     20    266     3.8     4.8     1.9    10.0     7.9    999 1034.8
## 8728:   91     12     31     21    269     4.4     5.5     1.7    10.0     7.6    999 1034.5
## 8729:   91     12     31     22    263     4.1     5.4     1.9     9.1     7.9    999 1034.4
## 8730:   91     12     31     23    254     4.5     5.7     1.6     8.3     7.6    999 1034.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -3.0     6.4    999     99
## 2:   -3.4     6.4    999     99
## 3:   -4.1     6.4    999     99
## 4:   -4.3     6.4    999     99
## 5:   -4.4     6.4    999     99
## ----
## 8726:   0.8     5.5    999     99
## 8727:   1.6     5.5    999     99
## 8728:   2.0     5.5    999     99
## 8729:   2.1     5.6    999     99
## 8730:   2.3     5.6    999     99
##
## [[8]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    92      1      1      1    249     5.9     7.0     1.2     7.7     7.3    999 1034.4
## 2:    92      1      1      2    260     5.6     6.3     1.1     7.7     7.5    999 1034.3
## 3:    92      1      1      3    269     5.0     5.9     1.1    11.1     7.6    999 1034.2
## 4:    92      1      1      4    281     5.2     6.4     1.0    10.0     8.1    999 1034.1
## 5:    92      1      1      5    280     5.4     6.4     1.0    10.0     8.1    999 1033.5
## ----
## 8732:   92     12     31     19    264     3.6     4.3     1.3     8.3     7.5    999 1007.0
## 8733:   92     12     31     20    248     2.5     3.1     1.3    10.0     7.7    999 1006.3
## 8734:   92     12     31     21    229     6.7     7.4     1.1    10.0     7.2    999 1005.5
## 8735:   92     12     31     22    236     8.8     9.8     1.0    10.0     7.4    999 1004.8
## 8736:   92     12     31     23    252     5.6     6.8     1.0    10.0     7.5    999 1005.6
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:     2.1     5.6    999     99
## 2:     1.7     5.6    999     99
## 3:     1.7     5.6    999     99
## 4:     1.7     5.6    999     99
## 5:     1.6     5.6    999     99
## ----
## 8732:   3.2     4.7    999     99
## 8733:   3.9     4.7    999     99
## 8734:   5.5     4.7    999     99
## 8735:   6.4     4.7    999     99
## 8736:   6.3     4.7    999     99
##
## [[9]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    93      1      1      0    241     7.6     8.6     0.9    10.0     7.4    999 1006.3
## 2:    93      1      1      1    245     7.3     8.2     0.8    10.0     7.7    999 1006.3
## 3:    93      1      1      2    243     8.1     8.9     0.8    10.0     8.0    999 1006.5
## 4:    93      1      1      3    261     7.7     8.8     0.7     9.1     7.9    999 1006.5
## 5:    93      1      1      4    269     7.8     8.6     0.8     9.1     7.8    999 1007.0
## ----
## 8689:   93     12     31     19    228     9.7    12.1     0.8     3.4     3.4    217 1018.0
## 8690:   93     12     31     20    233    10.1    12.9     0.8     3.3     3.4    219 1018.6
## 8691:   93     12     31     21    255    10.8    14.4     0.9     3.4     3.4    241 1019.7
## 8692:   93     12     31     22    252     9.8    12.6     0.9     3.7     3.5    256 1020.7
## 8693:   93     12     31     23    260     9.4    13.3     0.8     3.4     3.4    267 1021.7
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:     6.7     4.7    999 99.0
## 2:     7.1     4.7    999 99.0
## 3:     7.4     4.4    999 99.0
## 4:     7.8     4.4    999 99.0
## 5:     7.9     4.4    999 99.0
## ----
## 8689:  -1.2     5.6    999 21.7
## 8690:  -0.8     5.6    999 21.9
## 8691:  -0.6     5.6    999 24.1
## 8692:  -0.8     5.6    999 25.6
## 8693:  -1.1     5.5    999 26.7
##
```

```
## [[10]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    94      1      1      0    248    9.9  12.2  0.7  3.6  3.4  267 1022.5
## 2:    94      1      1      1    252   10.3  13.3  0.7  3.4  3.4  269 1022.7
## 3:    94      1      1      2    259   11.7  14.7  0.7  3.4  3.4  270 1023.4
## 4:    94      1      1      3    261   11.8  14.3  0.9  4.0  3.7  265 1023.7
## 5:    94      1      1      4    262   10.4  12.6  0.9  4.0  3.5  271 1024.1
## ----
## 8683:    94     12     31     19    160    5.7   6.7   0.4  10.0  5.7   74 1026.6
## 8684:    94     12     31     20    183    5.0   6.3   0.4   8.3  4.5   72 1026.5
## 8685:    94     12     31     21    191    7.2   9.1   0.4  10.0  4.2   48 1025.8
## 8686:    94     12     31     22    192    5.9   6.8   0.4   2.5  3.6  163 1025.7
## 8687:    94     12     31     23    186    7.7   9.9   0.5   2.9  3.3  171 1025.2
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -1.1    5.5   999  26.7
## 2:   -1.5    5.5   999  26.9
## 3:   -1.4    5.5   999  27.0
## 4:   -1.6    5.5   999  26.5
## 5:   -1.4    5.5   999  27.1
## ----
## 8683:    2.8 999.0   999   7.4
## 8684:    4.3 999.0   999   7.2
## 8685:    4.7 999.0   999   4.8
## 8686:    4.0 999.0   999  16.3
## 8687:    3.6 999.0   999  17.1
##
## [[11]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    95      1      1      0    198    7.8   9.8   0.6   2.7  3.3  200 1024.4
## 2:    95      1      1      1    206    8.8  11.6   0.6   3.0  3.3  217 1023.8
## 3:    95      1      1      2    204    9.9  12.0   0.7   3.1  3.3  226 1022.5
## 4:    95      1      1      3    205   11.5  14.2   0.8   3.3  3.3  217 1021.5
## 5:    95      1      1      4    215   10.5  13.2   0.9   3.7  3.6  229 1021.4
## ----
## 8656:    95     12     31     19    245    4.3   5.3   0.2  12.5  5.8   74 1014.2
## 8657:    95     12     31     20    245    4.6   5.6   0.2  12.5  4.5   72 1014.3
## 8658:    95     12     31     21    231    3.3   4.2   0.2  14.3  4.8   77 1013.5
## 8659:    95     12     31     22    232    3.2   3.7   0.2  12.5  6.1   82 1014.3
## 8660:    95     12     31     23    226    3.3   4.1   0.2  14.3  6.4   77 1014.2
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.2 999.0   999  20.0
## 2:    3.5 999.0   999  21.7
## 3:    4.1 999.0   999  22.6
## 4:    5.1 999.0   999  21.7
## 5:    4.8 999.0   999  22.9
## ----
## 8656:    3.0   5.5   999   7.4
## 8657:    3.2   5.5   999   7.2
## 8658:    3.2   5.5   999   7.7
## 8659:    3.6   5.5   999   8.2
## 8660:    3.6   5.5   999   7.7
##
## [[12]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    96      1      1      0    218    2.9   3.4   0.16 12.50  6.36   86 1013.9
## 2:    96      1      1      1    225    2.8   3.2   0.17 12.50  7.35   82 1014.0
## 3:    96      1      1      2    234    1.9   2.3   0.18 12.50  7.21   74 1013.5
## 4:    96      1      1      3    233    2.8   3.8   0.17 12.50  6.93   77 1013.3
## 5:    96      1      1      4    263    3.2   3.8   0.15 12.50  7.36   89 1013.4
## ----
## 8948:    96     12     31     19    337    7.6   9.8   0.86  4.55  3.85   49 1021.2
## 8949:    96     12     31     20    334    8.0  10.7   1.00  5.26  3.83   49 1021.1
## 8950:    96     12     31     21    326    8.6  10.5   1.23  5.00  4.09   48 1021.9
## 8951:    96     12     31     22    323   11.0  13.6   1.31  5.88  4.19   47 1023.1
## 8952:    96     12     31     23    332    9.4  12.2   1.32  5.26  4.13   47 1024.1
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.6   5.5   999   99
## 2:    3.5   5.5   999   99
## 3:    3.2   5.5   999   99
## 4:    3.5   5.5   999   99
## 5:    3.2   5.5   999   99
## ----
## 8948:   -7.0   6.3   999   99
## 8949:   -7.1   6.3   999   99
## 8950:   -7.2   6.3   999   99
## 8951:   -7.6   6.3   999   99
## 8952:   -8.0   6.3   999   99
##
```

```
## [[13]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    97      1      1      0    322   10.7   13.7   1.27   4.17   4.13      5 1024.9
## 2:    97      1      1      1    312   10.8   13.8   1.41   5.26   4.14     40 1026.2
## 3:    97      1      1      2    323   11.4   14.0   1.43   4.55   4.25    355 1026.8
## 4:    97      1      1      3    336   11.4   14.2   1.57   5.56   4.40     42 1027.3
## 5:    97      1      1      4    333   10.9   14.0   1.83   6.67   4.76     45 1027.6
## ----
## 5708:   97     12     31     19    274   10.4   13.5   1.06   3.85   4.07   999 1004.0
## 5709:   97     12     31     20    290    9.7   12.5   1.02  12.50   4.03   999 1005.6
## 5710:   97     12     31     21    289   10.1   12.0   1.04  11.11   4.27   999 1007.7
## 5711:   97     12     31     22    305   10.4   13.4   0.91  12.50   3.93   999 1009.7
## 5712:   97     12     31     23    304   13.6   16.9   1.28   4.00   3.96   999 1011.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -8.3    6.3   999    99
## 2:   -9.1    6.3   999    99
## 3:   -9.2    6.3   999    99
## 4:   -9.7    6.3   999    99
## 5:  -10.6    6.3   999    99
## ----
## 5708:  -1.5    5.9   999    99
## 5709:  -1.8    5.6   999    99
## 5710:  -3.1    5.5   999    99
## 5711:  -3.7    5.2   999    99
## 5712:  -4.8    5.1   999    99
##
## [[14]]
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    98      1      1      0    295   10.8   15.4   1.34   4.35   4.24   999 1014.0
## 2:    98      1      1      1    287   10.6   13.9   1.29   4.35   4.11   999 1015.4
## 3:    98      1      1      2    286   11.7   15.5   1.12   4.00   4.00   999 1016.3
## 4:    98      1      1      3    286   11.9   15.0   1.04   4.00   3.94   999 1017.1
## 5:    98      1      1      4    295   12.2   14.7   1.26   4.17   4.02   999 1017.9
## ----
## 8780:   98     12     31     19    242    6.9    9.1   0.56  11.11   3.56   999 1017.8
## 8781:   98     12     31     20    242    6.6    8.6   0.53   2.86   3.58   999 1017.7
## 8782:   98     12     31     21    229    6.2    8.5   0.43   2.94   3.48   999 1017.9
## 8783:   98     12     31     22    207    5.6    7.7   0.39  10.00   4.25   999 1017.7
## 8784:   98     12     31     23    213    5.2    7.5   0.35  11.11   4.81   999 1017.4
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -5.9    5.1   999    99
## 2:   -6.5    5.1   999    99
## 3:   -7.0    5.2   999    99
## 4:   -7.6    5.6   999    99
## 5:   -8.1    5.6   999    99
## ----
## 8780:  -5.5    5.9   999    99
## 8781:  -5.1    5.8   999    99
## 8782:  -4.6    5.6   999    99
## 8783:  -4.4    5.8   999    99
## 8784:  -4.5    5.6   999    99
##
## [[15]]
##      YYYY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:  1999      1      1      0    221    5.4    7.2   0.33  11.11   5.25   999 1017.4
## 2:  1999      1      1      1    218    5.6    7.3   0.31  11.11   5.51   999 1016.5
## 3:  1999      1      1      2    226    5.7    7.0   0.32  12.50   6.53   999 1015.8
## 4:  1999      1      1      3    228    5.7    7.3   0.31  11.11   6.17   999 1015.3
## 5:  1999      1      1      4    237    5.9    7.7   0.39  11.11   5.02   999 1015.0
## ----
## 8344:  1999     12     31     19    340    4.9    6.5   0.65   9.09   3.92   999 1017.2
## 8345:  1999     12     31     20    350    4.5    5.9   0.58   4.17   4.04   999 1017.4
## 8346:  1999     12     31     21    346    3.2    4.6   0.58  11.11   4.24   999 1018.0
## 8347:  1999     12     31     22    360    3.3    4.1   0.51  10.00   4.21   999 1018.1
## 8348:  1999     12     31     23      5    1.2    2.3   0.51  10.00   4.40   999 1018.7
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -4.3    5.6  999.0    99
## 2:   -4.0    5.7  999.0    99
## 3:   -3.9    5.7  999.0    99
## 4:   -3.9    5.7  999.0    99
## 5:   -3.8    5.6  999.0    99
## ----
## 8344:    0.1    5.9  -8.0    99
## 8345:    0.5    5.9  -8.2    99
## 8346:    0.8    5.9  -5.5    99
## 8347:    0.9    5.9  -4.3    99
## 8348:    1.2    5.9  -3.5    99
##
```

```

## [[16]]
##      V1    V2    V3    V4    V5    V6    V7    V8    V9    V10   V11   V12
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1: 2000    1    1    0   315  0.8  1.5  0.54 10.00  4.55  999 1019.2
##  2: 2000    1    1    1   271  0.7  1.9  0.53  4.55  4.61  999 1020.3
##  3: 2000    1    1    2   232  2.3  3.1  0.52  4.76  4.78  999 1020.4
##  4: 2000    1    1    3   236  2.9  3.8  0.52 10.00  4.86  999 1021.0
##  5: 2000    1    1    4   232  4.1  4.9  0.50 10.00  5.00  999 1021.2
## ----
## 5108: 2000    7   31   19   59  3.3  3.8  0.61  9.09  4.68  999 1024.1
## 5109: 2000    7   31   20   45  3.9  4.7  0.59  9.09  4.94  999 1023.6
## 5110: 2000    7   31   21   56  3.8  4.5  0.53  8.33  4.71  999 1023.5
## 5111: 2000    7   31   22   63  4.3  5.1  0.56  8.33  4.94  999 1023.4
## 5112: 2000    7   31   23   56  4.2  5.0  0.61  8.33  5.20  999 1022.8
##      V13   V14   V15   V16
##      <num> <num> <num> <num>
##  1:   1.1   5.9  -3.6   99
##  2:   1.2   5.9  -3.6   99
##  3:   1.5   5.8  -3.3   99
##  4:   1.3   5.9  -3.6   99
##  5:   0.9   5.9  -4.0   99
## ----
## 5108: 17.2 17.6 16.0   99
## 5109: 17.2 17.6 16.0   99
## 5110: 17.2 17.6 15.9   99
## 5111: 17.2 17.6 16.0   99
## 5112: 17.2 17.6 16.0   99
##
## [[17]]
##      YYYY    MM    DD    hh    WD    WSPD    GST    WVHT    DPD    APD    MWD    BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1: 2001    1    1    0   255  13.2  16.4  1.49  4.76  4.30  999 1001.2
##  2: 2001    1    1    1   255  14.3  17.5  1.50  4.35  4.17  999 1002.0
##  3: 2001    1    1    2   263  15.8  19.9  1.68  4.76  4.31  999 1002.4
##  4: 2001    1    1    3   267  14.4  17.5  1.64  5.00  4.37  999 1003.6
##  5: 2001    1    1    4   270  13.9  17.6  1.55  4.76  4.21  999 1004.6
## ----
## 8756: 2001   12   31   19   248  9.3  11.1  0.67  3.45  3.21  999 1009.9
## 8757: 2001   12   31   20   242  8.9  10.7  0.69  3.23  3.15  999 1010.3
## 8758: 2001   12   31   21   240  10.5  99.0 99.00 99.00 99.00 999 9999.0
## 8759: 2001   12   31   22   244  8.6  99.0 99.00 99.00 99.00 999 9999.0
## 8760: 2001   12   31   23   244  8.4  11.3  0.77  3.57  3.31  999 1011.9
##      ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num>
##  1:  -1.5   4.3  -7.6   99   99
##  2:  -1.9   4.3  -7.1   99   99
##  3:  -1.9   4.3  -7.3   99   99
##  4:  -2.1   4.3  -7.2   99   99
##  5:  -2.2   4.4  -8.3   99   99
## ----
## 8756:  -0.3   7.0  -8.7   99   99
## 8757:   0.1   7.0  -8.9   99   99
## 8758: 999.0 999.0 999.0 99   99
## 8759: 999.0 999.0 999.0 99   99
## 8760:   0.1   6.7  -8.9   99   99
##
## [[18]]
##      YYYY    MM    DD    hh    WD    WSPD    GST    WVHT    DPD    APD    MWD    BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1: 2002    1    1    0   227  8.5  10.4  0.60  3.23  3.13  999 1012.9
##  2: 2002    1    1    1   234  9.5  11.5  0.66  3.13  3.09  999 1013.4
##  3: 2002    1    1    2   232  9.7  12.4  0.73  3.57  3.26  999 1013.9
##  4: 2002    1    1    3   255  10.5  12.5  0.80  3.70  3.37  999 1013.5
##  5: 2002    1    1    4   261  10.1  12.4  0.79  3.70  3.45  999 1013.4
## ----
## 8756: 2002   12   31   19   183  4.5  5.8  0.96  5.56  4.16  999 1015.0
## 8757: 2002   12   31   20   313  2.0  2.4  0.93  4.55  4.31  999 1014.6
## 8758: 2002   12   31   21   316  2.0  2.5  0.98  6.25  4.62  999 1014.7
## 8759: 2002   12   31   22   330  2.6  3.2  0.99  6.67  4.98  999 1014.3
## 8760: 2002   12   31   23   322  0.8  1.8  1.11  7.14  5.12  999 1013.6
##      ATMP    WTMP    DEWP    VIS    TIDE
##      <num> <num> <num> <num> <num>
##  1:   0.0   6.7  -8.4   99   99
##  2:   0.0   6.7  -8.3   99   99
##  3:  -0.5   6.7  -8.1   99   99
##  4:  -0.4   6.7  -8.1   99   99
##  5:  -0.4   6.7  -8.5   99   99
## ----
## 8756:   5.1   6.0   4.8   99   99
## 8757:   4.4   6.0   4.2   99   99
## 8758:   4.8   6.0   4.6   99   99
## 8759:   4.7   6.0   4.6   99   99
## 8760:   4.5   6.0   4.4   99   99
##

```

```
## [[19]]
##      YYYY    MM    DD    hh    WD  WSPD  GST  WVHT  DPD  APD  MWD  BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1: 2003     1     1     0   153   0.6   1.2   0.99  6.67  5.03  999 1012.8
##  2: 2003     1     1     1   183   3.4   3.8   0.93  6.67  4.92  999 1012.6
##  3: 2003     1     1     2   180   4.2   5.0   0.89  6.25  4.91  999 1011.8
##  4: 2003     1     1     3   207   6.4   7.4   0.80  6.67  4.89  999 1011.1
##  5: 2003     1     1     4   204   7.3   8.2   0.70  6.67  4.73  999 1010.3
## ----
## 8755: 2003    12    31    19   276   5.4   6.5   0.48  3.23  3.09  999 1019.0
## 8756: 2003    12    31    20   237   3.7   4.3   0.28  2.86  3.03  999 1018.9
## 8757: 2003    12    31    21   208   3.0   3.6   0.18  2.50  3.24  999 1018.1
## 8758: 2003    12    31    22   185   4.3   5.2   0.00  0.00  0.00  999 1017.4
## 8759: 2003    12    31    23   161   4.6   5.3   0.00  0.00  0.00  999 1016.6
##      ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num>
##  1:  4.7   6.0   4.6   99   99
##  2:  4.7   6.0   4.6   99   99
##  3:  5.0   6.0   4.9   99   99
##  4:  5.9   6.0   5.8   99   99
##  5:  6.0   6.0   5.3   99   99
## ----
## 8755:  5.5   5.2  -1.4   99   99
## 8756:  5.7   5.2   0.0   99   99
## 8757:  5.6   5.2   0.7   99   99
## 8758:  5.9   5.2   0.0   99   99
## 8759:  5.5   5.2  -0.3   99   99
##
## [[20]]
##      YYYY    MM    DD    hh    WD  WSPD  GST  WVHT  DPD  APD  MWD  BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
##  1: 2004     1     1     0   184   8.6  10.5   0.17  2.50  3.03  999 1014.9
##  2: 2004     1     1     1   214   9.7  11.7   0.43  2.78  2.89  999 1014.2
##  3: 2004     1     1     2   227   9.9  12.2  99.00  99.00  99.00  999 1013.8
##  4: 2004     1     1     3   232  11.8  14.5   0.96  3.45  3.34  999 1013.0
##  5: 2004     1     1     4   232   9.2  11.3   1.00  3.57  3.43  999 1013.2
## ----
## 8757: 2004    12    31    19   153   7.5   8.8   0.96  4.35  3.85  999 1025.9
## 8758: 2004    12    31    20   165   6.2   7.4   0.96  4.76  3.92  999 1025.6
## 8759: 2004    12    31    21   172   6.4   7.2   0.96  4.35  4.00  999 1025.0
## 8760: 2004    12    31    22   175   8.1   9.9   0.87  4.76  3.91  999 1023.8
## 8761: 2004    12    31    23   176   9.2  10.4   0.88  4.17  3.69  999 1023.0
##      ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num>
##  1:  5.2   5.2  999.0   99   99
##  2:  5.1   5.2   0.0   99   99
##  3:  4.8   5.2  -0.8   99   99
##  4:  5.1   5.2  -0.2   99   99
##  5:  5.2   5.2  -0.7   99   99
## ----
## 8757:  6.3   6.3   4.9   99   99
## 8758:  6.6   6.3   5.4   99   99
## 8759:  7.4   6.3   5.9   99   99
## 8760:  7.4   6.3   6.3   99   99
## 8761:  7.4   6.3   6.7   99   99
##
## [[21]]
##      YYYY    MM    DD    hh    mm  WD  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##  1: 2005     1     1     0     0  187   9.0  10.1   0.85  3.23  3.58  999
##  2: 2005     1     1     1     0  193   8.3  10.5   0.78  3.85  3.57  999
##  3: 2005     1     1     2     0  212   7.0   8.9   0.90  3.13  3.50  999
##  4: 2005     1     1     3     0  210   8.8  11.2   1.00  4.17  3.70  999
##  5: 2005     1     1     4     0  237   6.8   8.0   1.00  3.33  3.79  999
## ----
## 8704: 2005    12    31    19     0   56   4.3   5.7   0.98  11.11  5.64  999
## 8705: 2005    12    31    20     0   56   3.4   4.5   1.06  10.00  5.49  999
## 8706: 2005    12    31    21     0   52   2.9   4.7   1.07  11.11  5.65  999
## 8707: 2005    12    31    22     0   59   5.1   6.7   1.03  11.11  5.49  999
## 8708: 2005    12    31    23     0   52   4.5   7.2   1.00  11.11  5.28  999
##      BAR  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##  1: 1022.6   7.6   6.3   7.1   99   99
##  2: 1022.1   8.3   6.3   6.1   99   99
##  3: 1022.0   8.2   6.3   5.2   99   99
##  4: 1021.1   8.7   6.3   5.1   99   99
##  5: 1021.4   7.9   6.3   5.0   99   99
## ----
## 8704: 1011.0   0.4   5.8  999.0   99   99
## 8705: 1011.1   0.4   5.9  999.0   99   99
## 8706: 1011.6   0.8   5.9  -4.1   99   99
## 8707: 1011.1   1.1   5.9  -2.7   99   99
## 8708: 1011.4   1.4   5.8  -0.8   99   99
##
```

```
## [[22]]
##      YYYY   MM   DD   hh   mm   WD   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2006     1     1     0     0    74    5.3    6.1    0.92 11.11 5.01 999
## 2: 2006     1     1     1     0    83    4.9    6.0    0.89 10.00 5.09 999
## 3: 2006     1     1     2     0    82    5.3    6.9    0.84 11.11 4.78 999
## 4: 2006     1     1     3     0    62    8.9   10.9    0.99 11.11 4.32 999
## 5: 2006     1     1     4     0    56    9.8   11.5    1.40 4.55 4.16 999
## ----
## 8719: 2006    12    31    19     0   305    4.5    6.0    0.57 4.55 3.49 999
## 8720: 2006    12    31    20     0   321    3.2    4.8    0.47 4.55 3.69 999
## 8721: 2006    12    31    21     0   276    3.1    5.0    0.40 4.35 4.09 999
## 8722: 2006    12    31    22     0   313    3.3    4.4    0.41 5.88 4.26 999
## 8723: 2006    12    31    23     0   303    2.8    3.7    0.39 5.56 4.30 999
##      BAR   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1011.8    0.6    5.8   -0.7    99    99
## 2: 1011.5    0.7    5.8    0.4    99    99
## 3: 1010.7    1.3    5.8    0.4    99    99
## 4: 1009.6    1.7    5.8    1.3    99    99
## 5: 1009.3    1.1    5.8    0.4    99    99
## ----
## 8719: 1028.8    2.2    7.1 999.0    99    99
## 8720: 1028.8    2.7    7.1 999.0    99    99
## 8721: 1028.9    3.2    7.1 999.0    99    99
## 8722: 1029.0    3.5    7.1 999.0    99    99
## 8723: 1028.9    3.8    7.1 999.0    99    99
##
## [[23]]
##      #YY   MM   DD   hh   mm   WDIR   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2007     1     1     0     0   209    2.2    3.1    0.39 5.00 4.32 999
## 2: 2007     1     1     1     0   184    1.6    2.3    0.37 4.76 4.33 999
## 3: 2007     1     1     2     0   173    2.8    4.0    0.33 4.17 4.24 999
## 4: 2007     1     1     3     0   183    5.6    6.7    0.32 4.17 4.19 999
## 5: 2007     1     1     4     0   201    6.0    7.1    0.32 2.50 3.38 999
## ----
## 8690: 2007    12    31    19     0   271   11.7   13.9    1.47 7.69 4.75 999
## 8691: 2007    12    31    20     0   280   11.8   14.9    1.68 7.69 4.62 999
## 8692: 2007    12    31    21     0   271   12.8   16.1    1.58 8.33 4.49 999
## 8693: 2007    12    31    22     0   278   12.1   14.5    1.50 4.35 4.44 999
## 8694: 2007    12    31    23     0   272   12.7   15.5    1.42 4.35 4.29 999
##      PRES   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1029.0    3.6    7.1 999.0    99    99
## 2: 1028.8    3.5    7.1 999.0    99    99
## 3: 1028.9    3.6    7.1 999.0    99    99
## 4: 1028.3    3.1    7.1 999.0    99    99
## 5: 1028.7    2.8    7.1 999.0    99    99
## ----
## 8690: 1007.4    4.2    4.0    0.3    99    99
## 8691: 1008.9    4.4    4.3   -0.2    99    99
## 8692: 1010.6    4.7    4.3   -0.9    99    99
## 8693: 1012.2    4.7    4.4   -1.1    99    99
## 8694: 1013.7    4.3    4.6   -1.3    99    99
##
## [[24]]
##      #YY   MM   DD   hh   mm   WDIR   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2008     1     1     0     0   274   11.6   14.1    1.40 4.17 4.17 999
## 2: 2008     1     1     1     0   282   10.6   12.9    1.23 4.17 4.02 999
## 3: 2008     1     1     2     0   284    9.5   11.5    1.05 4.00 3.99 999
## 4: 2008     1     1     3     0   282    7.3    8.7    0.85 3.45 3.79 999
## 5: 2008     1     1     4     0   268    4.9    6.0    0.64 7.69 4.09 999
## ----
## 8741: 2008    12    31    18    50    16   14.4   16.9    2.33 5.88 5.01 999
## 8742: 2008    12    31    19    50    19   14.5   16.9    2.67 6.25 5.26 999
## 8743: 2008    12    31    20    50     4   13.6   16.2    3.07 6.67 5.68 999
## 8744: 2008    12    31    21    50   335   13.5   16.2    2.53 7.14 5.27 999
## 8745: 2008    12    31    22    50   329   13.7   16.4    2.43 7.14 5.24 999
##      PRES   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1015.3    4.0    4.7   -1.6    99    99
## 2: 1016.4    3.6    4.7   -1.7    99    99
## 3: 1017.8    3.3    4.8   -1.6    99    99
## 4: 1018.9    3.2    4.8   -1.7    99    99
## 5: 1019.5    2.8    4.8   -1.4    99    99
## ----
## 8741: 996.8   -1.9    5.6   -2.2    99    99
## 8742: 997.2   -3.0    5.6   -3.2    99    99
## 8743: 997.9   -2.9    5.6   -4.1    99    99
## 8744: 1000.0  -4.4    5.6   -5.2    99    99
## 8745: 1001.3  -4.9    5.6   -5.9    99    99
##
```

```

## [[25]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2008      12      31      23      50      326      14.4      17.3      2.52      7.14      5.27      999
##      2: 2009       1       1       0       50      316      16.7      19.7      2.65      7.14      5.05      999
##      3: 2009       1       1       1       50      307      15.7      19.0      3.01      6.25      5.27      999
##      4: 2009       1       1       2       50      315      17.0      20.7      2.65      5.88      5.19      999
##      5: 2009       1       1       3       50      315      16.5      20.8      3.05      5.56      5.34      999
##      ----
## 8728: 2009      12      31      18      50      274      4.2      5.7      0.42      11.43      3.61      999
## 8729: 2009      12      31      19      50      258      3.6      4.7      0.39      11.43      3.38      999
## 8730: 2009      12      31      20      50       55      0.4      1.3      0.35      10.81      4.14      999
## 8731: 2009      12      31      21      50      339      1.3      2.2      0.34      12.12      5.39      999
## 8732: 2009      12      31      22      50       15      0.7      1.7      0.35      12.12      5.42      999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1002.4      -5.3      5.6      -6.8      99      99
##      2: 1003.2      -7.7      5.6      -9.6      99      99
##      3: 1003.9      -8.7      5.6     -12.0      99      99
##      4: 1004.8     -10.1      5.5     -13.2      99      99
##      5: 1005.5     -10.6      5.5     -13.2      99      99
##      ----
## 8728: 1021.8      -0.8      6.0      -1.6      99      99
## 8729: 1022.1      -0.8      6.0      -1.4      99      99
## 8730: 1021.0      -0.5      5.9      -1.1      99      99
## 8731: 1021.2      -0.2      5.9      -0.9      99      99
## 8732: 1020.8       0.5      5.9       0.3      99      99
##
## [[26]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2009      12      31      23      50      37      1.2      2.0      0.35      12.12      5.43      999
##      2: 2010       1       1       0       50      32      2.5      3.5      0.35      12.12      5.02      999
##      3: 2010       1       1       1       50       2      4.1      5.1      0.38      12.90      5.19      999
##      4: 2010       1       1       2       50       4      4.3      5.5      0.38      12.12      4.94      999
##      5: 2010       1       1       3       50      355      5.4      6.5      0.41      13.79      3.62      999
##      ----
## 7840: 2010      12      31      18      50      216      2.2      2.4      0.18      99.00      3.21      999
## 7841: 2010      12      31      19      50      221      4.0      4.5      0.17      99.00      4.11      999
## 7842: 2010      12      31      20      50      203      2.8      3.3      0.17      99.00      3.85      999
## 7843: 2010      12      31      21      50      190      4.1      4.6      0.16      99.00      3.85      999
## 7844: 2010      12      31      22      50      213      3.7      4.2      0.17      99.00      3.77      999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1020.0       1.0      5.9      -0.2      99      99
##      2: 1019.4       1.5      6.0      -0.6      99      99
##      3: 1018.4       1.4      6.0      -0.7      99      99
##      4: 1017.8       1.1      6.0      -0.8      99      99
##      5: 1016.8       0.8      6.1      -0.6      99      99
##      ----
## 7840: 1018.4       7.2      6.5      3.2      99      99
## 7841: 1018.6       7.5      6.5      3.0      99      99
## 7842: 1018.6       7.4      6.4      3.8      99      99
## 7843: 1018.3       7.0      6.3      4.0      99      99
## 7844: 1018.5       7.0      6.2      3.5      99      99
##
## [[27]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2010      12      31      23      50      225      3.8      4.2      0.16      99.00      4.05      999
##      2: 2011       1       1       0       50      234      4.9      5.7      0.19      99.00      2.74      999
##      3: 2011       1       1       1       50      234      5.8      7.1      0.25      99.00      2.56      999
##      4: 2011       1       1       2       50      233      5.7      6.8      0.39      2.47      2.58      999
##      5: 2011       1       1       3       50      227      6.4      7.2      0.43      2.47      2.57      999
##      ----
## 8742: 2011      12      31      18      50      180      0.0      0.1      99.00      99.00      99.00      999
## 8743: 2011      12      31      19      50      281      2.4      3.8      99.00      99.00      99.00      999
## 8744: 2011      12      31      20      50      287      2.4      3.7      99.00      99.00      99.00      999
## 8745: 2011      12      31      21      50      286      2.8      4.5      99.00      99.00      99.00      999
## 8746: 2011      12      31      22      50      289      2.6      3.7      99.00      99.00      99.00      999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1018.7       6.8      6.2      3.5      99      99
##      2: 1018.5       6.4      6.2      2.5      99      99
##      3: 1018.3       6.1      6.1      2.3      99      99
##      4: 1018.0       5.8      6.1      1.7      99      99
##      5: 1017.8       5.7      6.1      1.3      99      99
##      ----
## 8742: 1008.4       4.9      5.7      4.2      99      99
## 8743: 1008.0       5.4      6.1      4.3      99      99
## 8744: 1008.1       5.7      9.1      4.2      99      99
## 8745: 1008.9       5.7      7.4      4.3      99      99
## 8746: 1009.5       5.6      6.4      4.8      99      99
##

```

```
## [[28]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##  1: 2012      6      30      23      50      253      3.4      4.2      0.52      9.09      5.33      86
##  2: 2012      7       1       0      50      198      3.5      4.1      0.53      7.69      5.41      107
##  3: 2012      7       1       1      50      199      4.0      4.7      0.48     10.00      5.60      102
##  4: 2012      7       1       2      50      218      3.9      4.4      0.45      9.09      5.20      87
##  5: 2012      7       1       3      50      222      4.5      4.8      0.41      7.69      4.68     100
## ----
## 4405: 2012     12      31      18      50      277     11.6     14.2      0.95      4.00      3.61     258
## 4406: 2012     12      31      19      50      271     10.9     13.3      0.90      4.17      3.54     266
## 4407: 2012     12      31      20      50      274      9.6     11.1      0.91      3.85      3.60     273
## 4408: 2012     12      31      21      50      277     10.0     12.2      0.84      3.70      3.53     267
## 4409: 2012     12      31      22      50      257      7.4      9.7      0.65      3.70      3.36     279
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##  1: 1005.4     23.2     18.2     15.7      99      99
##  2: 1005.7     22.0     18.2     16.8      99      99
##  3: 1006.1     21.6     18.1     17.8      99      99
##  4: 1006.1     21.6     18.0     17.7      99      99
##  5: 1006.5     21.5     17.7     17.8      99      99
## ----
## 4405: 1012.2      1.6      7.7     -3.6      99      99
## 4406: 1012.2      1.3      7.8     -3.9      99      99
## 4407: 1012.3      1.6      7.8     -3.8      99      99
## 4408: 1012.1      2.0      7.8     -3.7      99      99
## 4409: 1011.5      2.0      7.8     -4.1      99      99
##
## [[29]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##  1: 2012     12      31      23      50      234      8.5     10.2      0.42      3.33      3.14     279
##  2: 2013       1       1       0      50      246      9.0     10.9      0.52      2.86      2.94     251
##  3: 2013       1       1       1      50      243      7.3      9.4      0.50      3.33      3.05     237
##  4: 2013       1       1       2      50      252     10.5     12.4      0.50      3.03      2.99     244
##  5: 2013       1       1       3      50      256     10.9     13.0      0.65      3.70      3.28     265
## ----
## 8205: 2013     12      31      18      50      267      5.1      7.1      0.59     10.81      4.03      81
## 8206: 2013     12      31      19      50      276      4.4      6.9      0.57     10.00      4.33      86
## 8207: 2013     12      31      20      50      278      5.6      7.2      0.55     10.00      4.48      97
## 8208: 2013     12      31      21      50      254      6.7      9.2      0.52     10.81      4.59      67
## 8209: 2013     12      31      22      50      257      8.4     11.0      0.65     10.00      3.79      79
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##  1: 1011.6      1.5      7.7     -3.7      99      99
##  2: 1010.8      1.5      7.7     -4.1      99      99
##  3: 1010.0      1.8      7.7     -4.0      99      99
##  4: 1009.0      2.4      7.7     -3.8      99      99
##  5: 1008.1      2.6      7.7     -3.8      99      99
## ----
## 8205: 1017.5     -5.8      5.9    -14.8      99      99
## 8206: 1017.4     -4.8      5.8    -14.6      99      99
## 8207: 1018.2     -3.9      5.8    -13.3      99      99
## 8208: 1018.6     -2.8      5.7    -12.0      99      99
## 8209: 1019.3     -2.0      5.8    -10.0      99      99
##
## [[30]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##  1: 2013     12      31      23      50      255      6.5     10.1      0.66      3.45      3.54     258
##  2: 2014       1       1       0      50      246      7.4     10.1      0.63      3.23      3.56     264
##  3: 2014       1       1       1      50      246      9.7     11.7      0.55      3.13      3.33     276
##  4: 2014       1       1       2      50      275     11.1     14.5      0.78      3.45      3.43     270
##  5: 2014       1       1       3      50      277     10.7     15.2      0.94      3.85      3.46     262
## ----
## 8749: 2014     12      31      18      50      289      6.1      8.6      0.38      2.86      2.87     288
## 8750: 2014     12      31      19      50      303      5.6      8.4      0.48      3.23      3.03     273
## 8751: 2014     12      31      20      50      299      5.1      7.8      0.50      3.23      3.04     285
## 8752: 2014     12      31      21      50      298      4.3      6.9      0.46      3.33      3.04     286
## 8753: 2014     12      31      22      50      282      5.7      8.0      0.45      3.23      3.04     287
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##  1: 1019.2     -2.1      5.8     -9.6      99      99
##  2: 1019.2     -2.2      5.8     -8.4      99      99
##  3: 1019.8     -1.9      5.9     -7.3      99      99
##  4: 1019.6     -1.7      5.9     -8.3      99      99
##  5: 1020.2     -2.1      5.9     -9.4      99      99
## ----
## 8749: 1022.9     -2.1      5.5    999.0      99      99
## 8750: 1023.1     -2.1      5.5    999.0      99      99
## 8751: 1023.2     -1.8      5.6    999.0      99      99
## 8752: 1023.0     -2.1      5.7    999.0      99      99
## 8753: 1023.2     -1.9      5.7    999.0      99      99
##
```



```

## [[31]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2014      12      31      23      50      287      4.9      8.3      0.44      3.23      3.06      281
## 2: 2015       1       1       0      50      280      4.8      7.7      0.39      3.03      2.91      283
## 3: 2015       1       1       1      50      275      4.1      5.4      0.35      2.86      2.98      278
## 4: 2015       1       1       2      50      236      5.3      6.9      0.27      2.86      2.82      277
## 5: 2015       1       1       3      50      220      4.8      6.9      0.20      99.00      2.77      999
## ----
## 8745: 2015      12      31      18      50      298      7.6      8.8      1.23      10.00      5.78      93
## 8746: 2015      12      31      19      50      310      6.4      8.1      1.23      10.00      5.43      100
## 8747: 2015      12      31      20      50      284      7.7      9.8      1.22      10.81      5.55      74
## 8748: 2015      12      31      21      50      280      8.8      10.6      1.25      10.00      5.28      94
## 8749: 2015      12      31      22      50      278      10.2      12.1      1.29      10.00      5.24      81
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1022.9      -2.3      5.7      999.0      99      99
## 2: 1022.7      -2.3      5.7      999.0      99      99
## 3: 1022.2      -2.5      5.7      999.0      99      99
## 4: 1021.9      -2.3      5.6      999.0      99      99
## 5: 1021.2      -2.7      5.6      999.0      99      99
## ----
## 8745: 1013.2      7.2      8.7      3.7      99      99
## 8746: 1013.4      6.8      8.7      3.4      99      99
## 8747: 1014.1      7.0      8.7      2.5      99      99
## 8748: 1014.8      6.5      8.6      1.7      99      99
## 8749: 1014.7      6.5      8.6      1.1      99      99
##
## [[32]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2015      12      31      23      50      280      8.8      10.6      1.06      10.00      4.83      83
## 2: 2016       1       1       0      50      275      9.9      12.0      1.01      10.00      4.60      85
## 3: 2016       1       1       1      50      266      8.9      10.4      1.09      10.00      4.49      83
## 4: 2016       1       1       2      50      274      9.3      10.7      1.04      10.00      4.42      81
## 5: 2016       1       1       3      50      279      9.8      11.5      1.08      9.09      4.56      87
## ----
## 8691: 2016      12      31      18      50      191      7.5      9.1      0.52      10.81      3.31      56
## 8692: 2016      12      31      19      50      188      7.5      9.5      0.58      10.81      3.30      336
## 8693: 2016      12      31      20      50      182      7.6      9.3      0.57      11.43      3.41      320
## 8694: 2016      12      31      21      50      174      9.1      11.4      0.71      10.81      3.52      80
## 8695: 2016      12      31      22      50      175      8.8      10.2      0.74      4.00      3.60      134
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1015.1      6.4      8.6      0.3      99      99
## 2: 1015.2      6.3      8.5     -0.4      99      99
## 3: 1015.4      6.0      8.5      0.3      99      99
## 4: 1015.3      5.7      8.5     -0.3      99      99
## 5: 1015.3      5.5      8.4     -0.4      99      99
## ----
## 8691: 1017.1      2.0      8.2      999.0      99      99
## 8692: 1016.8      2.4      8.2      999.0      99      99
## 8693: 1016.3      3.1      8.2      999.0      99      99
## 8694: 1015.4      3.7      8.1      999.0      99      99
## 8695: 1015.1      4.2      8.1      999.0      99      99
##
## [[33]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2016      12      31      23      50      177      9.1      10.7      0.82      10.81      3.84      93
## 2: 2017       1       1       0      50      177      7.3      8.8      0.87      10.81      3.94      75
## 3: 2017       1       1       1      50      174      7.4      8.7      0.85      4.00      3.95      132
## 4: 2017       1       1       2      50      186      8.6      10.7      0.85      4.35      3.92      135
## 5: 2017       1       1       3      50      207      7.9      10.0      0.94      12.12      3.90      126
## ----
## 8692: 2017      12      31      18      50      297      12.4      15.0      1.22      4.55      3.81      306
## 8693: 2017      12      31      19      50      294      12.6      15.7      1.15      4.35      3.81      312
## 8694: 2017      12      31      20      50      294      11.8      16.8      1.29      4.55      3.89      302
## 8695: 2017      12      31      21      50      293      12.8      17.0      1.36      4.55      3.97      299
## 8696: 2017      12      31      22      50      298      12.0      15.1      1.26      4.76      3.91      301
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1014.5      5.3      8.1      999      99      99
## 2: 1013.7      6.0      8.1      999      99      99
## 3: 1012.7      7.0      8.2      999      99      99
## 4: 1011.8      7.6      8.2      999      99      99
## 5: 1010.8      7.2      8.2      999      99      99
## ----
## 8692: 1017.4     -9.7      6.5      999      99      99
## 8693: 1018.5     -9.5      6.5      999      99      99
## 8694: 1019.7     -9.3      6.5      999      99      99
## 8695: 1019.7     -9.2      6.5      999      99      99
## 8696: 1020.3     -9.4      6.5      999      99      99
##

```

```
## [[34]]
##      #YY    MM    DD    hh    mm  WDIR  WSPD   GST  WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##    1: 2017    12    31    23    50   302   13.3  16.7   1.19  4.35  3.76   301
##    2: 2018     1     1     0    50   294   11.5  15.0   1.30  4.76  3.97   301
##    3: 2018     1     1     1    50   295   12.0  15.3   1.25  4.35  3.84   304
##    4: 2018     1     1     2    50   305   10.5  14.2   1.18  4.17  3.74   312
##    5: 2018     1     1     3    50   314   11.8  14.2   1.14  3.85  3.65   319
##    ---
## 8656: 2018    12    31    18    50   157    4.5   5.1   0.44 13.79  4.54    74
## 8657: 2018    12    31    19    50   155    5.7   7.0   0.43 14.81  3.84    78
## 8658: 2018    12    31    20    50   168    8.4   9.5   0.55 13.79  3.63   169
## 8659: 2018    12    31    21    50   165    8.3   9.7   0.71  3.57  3.70   140
## 8660: 2018    12    31    22    50   157    7.9   9.6   0.67  3.85  3.59   137
##      PRES  ATMP  WTMP  DEWP   VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##    1: 1020.6 -10.3   6.5 999.0   99   99
##    2: 1020.9 -10.3   6.5 999.0   99   99
##    3: 1020.8 -11.1   6.5 999.0   99   99
##    4: 1021.1 -11.8   6.5 999.0   99   99
##    5: 1021.1 -12.2   6.5 999.0   99   99
##    ---
## 8656: 1026.4   5.7   7.0   0.2   99   99
## 8657: 1025.7   6.0   7.0   1.1   99   99
## 8658: 1024.8   5.9   7.0  -0.4   99   99
## 8659: 1024.6   5.6   7.0  -0.2   99   99
## 8660: 1024.9   5.3   7.0  -0.5   99   99
##
## [[35]]
##      #YY    MM    DD    hh    mm  WDIR  WSPD   GST  WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##    1: 2019     1     1     0    50   158    9.6  11.5   0.81  4.00  3.77   135
##    2: 2019     1     1     1    50   136   10.6  12.3   0.99  4.35  3.95   131
##    3: 2019     1     1     2    50   143   11.1  13.3   1.22  4.76  4.18   130
##    4: 2019     1     1     3    50   139   12.3  14.6   1.31  5.00  4.15   131
##    5: 2019     1     1     4    50   133   12.3  15.6   1.41  5.00  4.31   134
##    ---
## 8609: 2019    12    31    18    50   330    6.9   8.4   3.45 10.00  7.47    99
## 8610: 2019    12    31    19    50   329    5.6   7.2   3.26 10.00  7.57   100
## 8611: 2019    12    31    20    50   294    4.0   5.6   3.00 10.81  7.62    90
## 8612: 2019    12    31    21    50   328    3.8   5.2   2.52 10.00  7.34   103
## 8613: 2019    12    31    22    50   298    6.3   8.8   2.83 10.00  8.00    96
##      PRES  ATMP  WTMP  DEWP   VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##    1: 1023.7   3.6   7.0   1.5   99   99
##    2: 1021.0   4.1   7.0   1.7   99   99
##    3: 1019.3   4.1   7.0   2.6   99   99
##    4: 1017.3   4.2   7.0   3.3   99   99
##    5: 1014.8   5.0   7.0   4.4   99   99
##    ---
## 8609: 999.3   3.1   7.1   3.1   99   99
## 8610: 999.5   3.2   7.1   3.2   99   99
## 8611: 1000.4   3.1   7.1   3.1   99   99
## 8612: 999.6   2.9   7.0   2.7   99   99
## 8613: 1000.4   3.2   6.9   2.3   99   99
##
## [[36]]
##      #YY    MM    DD    hh    mm  WDIR  WSPD   GST  WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##    1: 2019    12    31    23    50   295    5.4   7.0   2.48 10.00  7.51    94
##    2: 2020     1     1     0    50   276    5.3   6.9   2.46 10.00  7.61   103
##    3: 2020     1     1     1    50   257    7.1   9.3   2.09 10.00  7.03    91
##    4: 2020     1     1     2    50   247    7.7  10.0   2.17 10.81  6.89    77
##    5: 2020     1     1     3    50   242    7.8  10.0   2.32 10.00  7.45    80
##    ---
## 16099: 2020    12    31    23    10   300    8.0   9.8  99.00 99.00 99.00   999
## 16100: 2020    12    31    23    20   300    6.9   8.5  99.00 99.00 99.00   999
## 16101: 2020    12    31    23    30   301    7.1   9.2  99.00 99.00 99.00   999
## 16102: 2020    12    31    23    40   300    7.7  10.0   0.63  3.33  3.30   304
## 16103: 2020    12    31    23    50   300    8.1  10.0  99.00 99.00 99.00   999
##      PRES  ATMP  WTMP  DEWP   VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##    1: 1000.3   3.0   6.9   2.7   99   99
##    2: 1000.4   3.4   6.9   2.6   99   99
##    3: 1000.5   3.6   6.9   2.7   99   99
##    4: 999.9    3.9   6.8   2.9   99   99
##    5: 999.6   4.3   6.8   2.9   99   99
##    ---
## 16099: 1022.9   5.3   7.3  -2.9   99   99
## 16100: 1023.1   5.4   7.3  -2.3   99   99
## 16101: 1023.1   5.3   7.3  -2.5   99   99
## 16102: 1023.4   5.2   7.3  -2.6   99   99
## 16103: 1023.8   5.2   7.3  -2.7   99   99
##
```

```

## [[37]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2021      1      1      0      0      302      7.9      9.8 99.00 99.00 99.00 999
##      2: 2021      1      1      0      10     301      7.8      10.1 99.00 99.00 99.00 999
##      3: 2021      1      1      0      20     301      8.1      10.1 99.00 99.00 99.00 999
##      4: 2021      1      1      0      30     305      7.3      9.0 99.00 99.00 99.00 999
##      5: 2021      1      1      0      40     302      7.2      9.4 0.57 3.45 3.22 294
##      ---
##      51559: 2021      12     31     23     10     160      1.8      2.4 99.00 99.00 99.00 999
##      51560: 2021      12     31     23     20     174      2.0      2.5 99.00 99.00 99.00 999
##      51561: 2021      12     31     23     30     201      2.4      3.0 99.00 99.00 99.00 999
##      51562: 2021      12     31     23     40     204      2.4      2.9 0.43 10.00 5.98 111
##      51563: 2021      12     31     23     50     221      2.4      3.3 99.00 99.00 99.00 999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1024.1      5.2      7.4     -3.0      99      99
##      2: 1024.2      5.1      7.4     -3.0      99      99
##      3: 1024.4      5.1      7.4     -2.8      99      99
##      4: 1024.6      5.1      7.3     -2.8      99      99
##      5: 1024.7      5.0      7.3     -2.9      99      99
##      ---
##      51559: 1015.0 999.0      8.5 999.0      99      99
##      51560: 1015.0 999.0      8.5 999.0      99      99
##      51561: 1015.5 999.0      8.5 999.0      99      99
##      51562: 1015.6 999.0      8.5 999.0      99      99
##      51563: 1015.8 999.0      8.5 999.0      99      99
##
## [[38]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2022      1      1      0      0      239      2.5      3.2 99.00 99.00 99.00 999
##      2: 2022      1      1      0      10     235      1.9      2.8 99.00 99.00 99.00 999
##      3: 2022      1      1      0      20     207      1.6      2.4 99.00 99.00 99.00 999
##      4: 2022      1      1      0      30     183      1.3      1.7 99.00 99.00 99.00 999
##      5: 2022      1      1      0      40     176      1.5      2.1 0.40 9.09 6.19 137
##      ---
##      52525: 2022      12     31     23     10     999      4.1      4.9 99.00 99.00 99.00 999
##      52526: 2022      12     31     23     20     999      3.9      4.5 99.00 99.00 99.00 999
##      52527: 2022      12     31     23     30     999      4.1      4.5 99.00 99.00 99.00 999
##      52528: 2022      12     31     23     40     999      4.1      4.5 0.43 10.00 3.36 71
##      52529: 2022      12     31     23     50     999      4.0      5.1 0.41 10.00 3.33 68
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1015.7 999      8.5 999      99      99
##      2: 1015.7 999      8.5 999      99      99
##      3: 1015.7 999      8.5 999      99      99
##      4: 1015.5 999      8.5 999      99      99
##      5: 1015.5 999      8.5 999      99      99
##      ---
##      52525: 1011.5 999      7.6 999      99      99
##      52526: 1011.4 999      7.6 999      99      99
##      52527: 1011.1 999      7.6 999      99      99
##      52528: 1011.1 999      7.6 999      99      99
##      52529: 1011.0 999      7.6 999      99      99
##
## [[39]]
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2023      1      1      0      0     999      4.3      5.0 99.00 99.00 99.00 999
##      2: 2023      1      1      0      10     999      4.5      5.4 99.00 99.00 99.00 999
##      3: 2023      1      1      0      20     999      4.2      4.8 99.00 99.00 99.00 999
##      4: 2023      1      1      0      30     999      4.2      4.8 99.00 99.00 99.00 999
##      5: 2023      1      1      0      40     999      3.9      4.3 0.41 9.09 3.43 112
##      ---
##      52476: 2023      12     31     23     10     340      4.9      6.2 0.43 10.81 4.96 76
##      52477: 2023      12     31     23     20     332      5.0      6.0 99.00 99.00 99.00 999
##      52478: 2023      12     31     23     30     331      5.2      6.4 99.00 99.00 99.00 999
##      52479: 2023      12     31     23     40     337      5.2      6.9 0.50 10.00 3.73 99
##      52480: 2023      12     31     23     50     335      5.1      6.7 99.00 99.00 99.00 999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1010.8 999.0      7.6 999.0      99      99
##      2: 1010.6 999.0      7.6 999.0      99      99
##      3: 1010.2 999.0 999.0 999.0      99      99
##      4: 1010.0 999.0      7.6 999.0      99      99
##      5: 1009.8 999.0      7.6 999.0      99      99
##      ---
##      52476: 1014.2 3.6      7.3     -2.5      99      99
##      52477: 1014.3 3.3      7.3     -3.0      99      99
##      52478: 1014.4 3.2      7.3     -3.1      99      99
##      52479: 1014.4 3.1      7.3     -3.0      99      99
##      52480: 1014.6 3.0      7.2     -3.2      99      99

```

###b Identify and deal with the null data in the dataset.

```
variables_na<-list(WDIR=99,
                  WVHT=99,
                  DPD=99,
                  APD=99,
                  MWD=999,
                  DEWP=999,
                  VIS=99,
                  TIDE=99)
replace_na<-function(df, variables_na){
  for (col in names(variables_na)) {
    if (col %in% colnames(df)) {
      df[[col]][df[[col]] == variables_na[[col]]] <- NA
    }
  }
  return(df)
}
all_data <- replace_na(all_data, variables_na)
print(all_data)
```

```

## $`1985`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    85      1      1      0      60      4      5      99      99      99      999 1030.3
## 2:    85      1      1      1      80      4      5      99      99      99      999 1030.0
## 3:    85      1      1      2     100      4      5      99      99      99      999 1030.1
## 4:    85      1      1      3     100      4      5      99      99      99      999 1029.4
## 5:    85      1      1      4     110      4      5      99      99      99      999 1028.6
## ----
## 8715:   85     12     31     19     200     10     13     99      99      99      999 1008.5
## 8716:   85     12     31     20     200     11     15     99      99      99      999 1008.0
## 8717:   85     12     31     21     200     10     12     99      99      99      999 1008.7
## 8718:   85     12     31     22     210      9     12     99      99      99      999 1009.0
## 8719:   85     12     31     23     210      8     10     99      99      99      999 1009.1
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    4.7    6.7    999    99
## 2:    5.1    6.7    999    99
## 3:    5.6    6.6    999    99
## 4:    5.8    6.7    999    99
## 5:    5.8    6.7    999    99
## ----
## 8715:   7.5    4.6    999    99
## 8716:   7.9    4.7    999    99
## 8717:   7.4    4.8    999    99
## 8718:   7.2    4.9    999    99
## 8719:   6.7    4.4    999    99
##
## $`1986`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    86      1      1      0     210      9     11    99.0    99.0    99.0    999 1009.2
## 2:    86      1      1      1     210      9     10    99.0    99.0    99.0    999 1009.3
## 3:    86      1      1      2     220      8     10    99.0    99.0    99.0    999 1009.2
## 4:    86      1      1      3     220      6      8    99.0    99.0    99.0    999 1009.3
## 5:    86      1      1      4     210      6      8    99.0    99.0    99.0    999 1009.0
## ----
## 8164:   86     12     31     19     320      8     10     3.0    11.1     8.3    999 1017.5
## 8165:   86     12     31     20     350      8      9     2.9    11.1     8.2    999 1018.8
## 8166:   86     12     31     21     320      9     11     2.7    11.1     8.4    999 1019.6
## 8167:   86     12     31     22     320      8     10     2.7    11.1     8.6    999 1021.0
## 8168:   86     12     31     23     290      7      8     2.9    11.1     8.7    999 1022.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    5.8    4.3    999    99
## 2:    4.7    4.3    999    99
## 3:    4.0    4.3    999    99
## 4:    3.9    4.3    999    99
## 5:    3.9    4.3    999    99
## ----
## 8164:   4.0    6.2    999    99
## 8165:   4.3    6.2    999    99
## 8166:   4.4    5.9    999    99
## 8167:   3.9    5.9    999    99
## 8168:   3.2    5.9    999    99
##
## $`1987`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    87      1      1      0     290      8.0    10.0     2.7    11.1     8.6    999 1023.5
## 2:    87      1      1      1     290      7.0      8.0     2.4    10.0     8.0    999 1024.3
## 3:    87      1      1      2     290      6.0      8.0     2.5    11.1     8.3    999 1023.8
## 4:    87      1      1      3     300      6.0      7.0     2.6    11.1     8.6    999 1024.1
## 5:    87      1      1      4     290      5.0      6.0     2.7    12.5     8.7    999 1025.2
## ----
## 7598:   87     12     31     19     177      8.6    10.1     0.4    11.1     4.7    999 1023.4
## 7599:   87     12     31     20     195      7.9      9.3     0.5    11.1     4.3    999 1023.6
## 7600:   87     12     31     21     193      7.6      9.0     0.4    10.0     4.1    999 1022.3
## 7601:   87     12     31     22     223      6.7      8.0     0.4    10.0     4.1    999 1022.1
## 7602:   87     12     31     23     225      5.0      6.0     0.3    12.5     4.4    999 1021.3
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    2.8    5.9    999    99
## 2:    2.0    5.9    999    99
## 3:    1.6    5.9    999    99
## 4:    1.3    6.0    999    99
## 5:    1.0    5.9    999    99
## ----
## 7598:   0.5    5.1    999    99
## 7599:   0.1    5.1    999    99
## 7600:   0.9    5.1    999    99
## 7601:   1.6    5.1    999    99
## 7602:   1.6    5.1    999    99
##

```

```
## $`1988`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    88      1      1      1    191    5.7    6.7    0.3    14.3    4.7    999 1020.1
## 2:    88      1      1      2    182    8.0    9.3    0.4    3.6    3.8    999 1018.9
## 3:    88      1      1      3    196    8.1    10.3   0.4    3.0    3.5    999 1019.0
## 4:    88      1      1      4    193    7.8    8.7    0.4    2.9    3.4    999 1019.0
## 5:    88      1      1      5    182    6.9    8.9    0.3    2.6    3.7    999 1018.9
## ----
## 8067:   88     12     31     19    259    8.8    11.5   0.4    3.3    3.4    999 1013.9
## 8068:   88     12     31     20    267    8.5    10.2   0.5    3.6    3.5    999 1014.7
## 8069:   88     12     31     21    277    9.7    12.2   0.6    3.4    3.5    999 1015.5
## 8070:   88     12     31     22    291    9.6    12.6   0.4    3.6    3.5    999 1016.4
## 8071:   88     12     31     23    284    7.1    8.8    0.3    3.1    3.3    999 1017.9
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.9    5.1    999    99
## 2:    4.6    5.1    999    99
## 3:    4.7    5.1    999    99
## 4:    4.4    5.1    999    99
## 5:    4.3    5.1    999    99
## ----
## 8067:   4.4    4.7    999    99
## 8068:   4.7    4.7    999    99
## 8069:   4.3    4.7    999    99
## 8070:   3.6    4.7    999    99
## 8071:   3.3    4.7    999    99
##
## $`1989`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    89      1      1      0    309    8.5    9.8    0.2    2.9    3.3    999 1018.6
## 2:    89      1      1      1    329    9.0    11.2   0.3    2.9    3.2    999 1020.1
## 3:    89      1      1      2    326    7.4    9.9    0.3    3.1    3.4    999 1022.3
## 4:    89      1      1      3    340    8.2    11.4   0.2    3.0    3.5    999 1022.5
## 5:    89      1      1      4    349    9.6    11.4   0.3    3.2    3.4    999 1022.5
## ----
## 7929:   89     12     31     19    158    7.1    8.2    1.0    6.2    5.3    999 1013.9
## 7930:   89     12     31     20    163    7.0    8.2    1.1    7.1    5.4    999 1012.7
## 7931:   89     12     31     21    160    7.3    8.2    1.0    6.7    5.5    999 1011.4
## 7932:   89     12     31     22    150    7.3    8.1    1.0    7.1    5.6    999 1009.6
## 7933:   89     12     31     23    159    7.5    8.4    1.0    7.1    5.6    999 1008.0
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    2.8    4.7    999    99
## 2:    1.7    4.7    999    99
## 3:    1.1    4.7    999    99
## 4:    0.2    4.7    999    99
## 5:   -0.7    4.7    999    99
## ----
## 7929:   3.4    2.9    999    99
## 7930:   3.2    2.9    999    99
## 7931:   3.7    2.9    999    99
## 7932:   4.4    3.2    999    99
## 7933:   3.9    3.2    999    99
##
## $`1990`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    90      1      1      0    149    9.5    10.8   1.1    7.1    5.5    999 1004.9
## 2:    90      1      1      1    149    9.9    11.6   1.2    7.1    5.5    999 1003.1
## 3:    90      1      1      2    182    7.8    9.7    1.1    7.1    5.4    999 1001.8
## 4:    90      1      1      3    200    9.5    10.9   1.0    7.1    5.4    999 1000.5
## 5:    90      1      1      4    199    9.9    11.8   1.1    7.1    5.5    999 999.6
## ----
## 8699:   90     12     31     19    337    9.6    12.4   0.7    10.0   4.4    999 1023.4
## 8700:   90     12     31     20    322   10.3    12.8   0.8    6.2    4.7    999 1024.9
## 8701:   90     12     31     21    325    8.4    10.9   0.7    11.1   4.9    999 1026.1
## 8702:   90     12     31     22    327    9.7    12.4   0.7    6.2    4.9    999 1027.2
## 8703:   90     12     31     23    326    9.0    12.0   0.7    7.1    5.2    999 1028.6
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    4.3    3.3    999    99
## 2:    5.4    3.3    999    99
## 3:    7.0    3.2    999    99
## 4:    8.8    3.2    999    99
## 5:    8.6    3.2    999    99
## ----
## 8699:   0.0    6.4    999    99
## 8700:  -0.5    6.4    999    99
## 8701:  -1.0    6.4    999    99
## 8702:  -2.1    6.4    999    99
## 8703:  -2.6    6.4    999    99
##
```

```
## $`1991`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    91      1      1      0    322    10.6    12.8    0.8    7.7    5.0    999 1029.7
## 2:    91      1      1      1    343     8.7    10.9    0.8    5.9    5.1    999 1031.1
## 3:    91      1      1      2    336     7.3    10.7    0.7    7.1    5.0    999 1031.7
## 4:    91      1      1      3    328     9.1    11.2    0.7    7.1    5.2    999 1031.8
## 5:    91      1      1      4    334    10.6    12.3    0.8    6.7    4.7    999 1032.6
## ----
## 8726:   91     12     31     19    285     3.4     5.0     2.0    10.0     7.8    999 1035.0
## 8727:   91     12     31     20    266     3.8     4.8     1.9    10.0     7.9    999 1034.8
## 8728:   91     12     31     21    269     4.4     5.5     1.7    10.0     7.6    999 1034.5
## 8729:   91     12     31     22    263     4.1     5.4     1.9     9.1     7.9    999 1034.4
## 8730:   91     12     31     23    254     4.5     5.7     1.6     8.3     7.6    999 1034.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -3.0     6.4    999     99
## 2:   -3.4     6.4    999     99
## 3:   -4.1     6.4    999     99
## 4:   -4.3     6.4    999     99
## 5:   -4.4     6.4    999     99
## ----
## 8726:   0.8     5.5    999     99
## 8727:   1.6     5.5    999     99
## 8728:   2.0     5.5    999     99
## 8729:   2.1     5.6    999     99
## 8730:   2.3     5.6    999     99
##
## $`1992`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    92      1      1      1    249     5.9     7.0     1.2     7.7     7.3    999 1034.4
## 2:    92      1      1      2    260     5.6     6.3     1.1     7.7     7.5    999 1034.3
## 3:    92      1      1      3    269     5.0     5.9     1.1    11.1     7.6    999 1034.2
## 4:    92      1      1      4    281     5.2     6.4     1.0    10.0     8.1    999 1034.1
## 5:    92      1      1      5    280     5.4     6.4     1.0    10.0     8.1    999 1033.5
## ----
## 8732:   92     12     31     19    264     3.6     4.3     1.3     8.3     7.5    999 1007.0
## 8733:   92     12     31     20    248     2.5     3.1     1.3    10.0     7.7    999 1006.3
## 8734:   92     12     31     21    229     6.7     7.4     1.1    10.0     7.2    999 1005.5
## 8735:   92     12     31     22    236     8.8     9.8     1.0    10.0     7.4    999 1004.8
## 8736:   92     12     31     23    252     5.6     6.8     1.0    10.0     7.5    999 1005.6
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:     2.1     5.6    999     99
## 2:     1.7     5.6    999     99
## 3:     1.7     5.6    999     99
## 4:     1.7     5.6    999     99
## 5:     1.6     5.6    999     99
## ----
## 8732:   3.2     4.7    999     99
## 8733:   3.9     4.7    999     99
## 8734:   5.5     4.7    999     99
## 8735:   6.4     4.7    999     99
## 8736:   6.3     4.7    999     99
##
## $`1993`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    93      1      1      0    241     7.6     8.6     0.9    10.0     7.4    999 1006.3
## 2:    93      1      1      1    245     7.3     8.2     0.8    10.0     7.7    999 1006.3
## 3:    93      1      1      2    243     8.1     8.9     0.8    10.0     8.0    999 1006.5
## 4:    93      1      1      3    261     7.7     8.8     0.7     9.1     7.9    999 1006.5
## 5:    93      1      1      4    269     7.8     8.6     0.8     9.1     7.8    999 1007.0
## ----
## 8689:   93     12     31     19    228     9.7    12.1     0.8     3.4     3.4    217 1018.0
## 8690:   93     12     31     20    233    10.1    12.9     0.8     3.3     3.4    219 1018.6
## 8691:   93     12     31     21    255    10.8    14.4     0.9     3.4     3.4    241 1019.7
## 8692:   93     12     31     22    252     9.8    12.6     0.9     3.7     3.5    256 1020.7
## 8693:   93     12     31     23    260     9.4    13.3     0.8     3.4     3.4    267 1021.7
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:     6.7     4.7    999 99.0
## 2:     7.1     4.7    999 99.0
## 3:     7.4     4.4    999 99.0
## 4:     7.8     4.4    999 99.0
## 5:     7.9     4.4    999 99.0
## ----
## 8689:  -1.2     5.6    999 21.7
## 8690:  -0.8     5.6    999 21.9
## 8691:  -0.6     5.6    999 24.1
## 8692:  -0.8     5.6    999 25.6
## 8693:  -1.1     5.5    999 26.7
##
```

```
## $`1994`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    94      1      1      0    248    9.9   12.2   0.7   3.6   3.4   267 1022.5
## 2:    94      1      1      1    252   10.3   13.3   0.7   3.4   3.4   269 1022.7
## 3:    94      1      1      2    259   11.7   14.7   0.7   3.4   3.4   270 1023.4
## 4:    94      1      1      3    261   11.8   14.3   0.9   4.0   3.7   265 1023.7
## 5:    94      1      1      4    262   10.4   12.6   0.9   4.0   3.5   271 1024.1
## ----
## 8683:   94     12     31     19    160    5.7    6.7    0.4  10.0   5.7    74 1026.6
## 8684:   94     12     31     20    183    5.0    6.3    0.4   8.3   4.5    72 1026.5
## 8685:   94     12     31     21    191    7.2    9.1    0.4  10.0   4.2    48 1025.8
## 8686:   94     12     31     22    192    5.9    6.8    0.4   2.5   3.6   163 1025.7
## 8687:   94     12     31     23    186    7.7    9.9    0.5   2.9   3.3   171 1025.2
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -1.1    5.5   999 26.7
## 2:   -1.5    5.5   999 26.9
## 3:   -1.4    5.5   999 27.0
## 4:   -1.6    5.5   999 26.5
## 5:   -1.4    5.5   999 27.1
## ----
## 8683:   2.8 999.0   999   7.4
## 8684:   4.3 999.0   999   7.2
## 8685:   4.7 999.0   999   4.8
## 8686:   4.0 999.0   999  16.3
## 8687:   3.6 999.0   999  17.1
##
## $`1995`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    95      1      1      0    198    7.8    9.8    0.6   2.7   3.3   200 1024.4
## 2:    95      1      1      1    206    8.8   11.6    0.6   3.0   3.3   217 1023.8
## 3:    95      1      1      2    204    9.9   12.0    0.7   3.1   3.3   226 1022.5
## 4:    95      1      1      3    205   11.5   14.2    0.8   3.3   3.3   217 1021.5
## 5:    95      1      1      4    215   10.5   13.2    0.9   3.7   3.6   229 1021.4
## ----
## 8656:   95     12     31     19    245    4.3    5.3    0.2  12.5   5.8    74 1014.2
## 8657:   95     12     31     20    245    4.6    5.6    0.2  12.5   4.5    72 1014.3
## 8658:   95     12     31     21    231    3.3    4.2    0.2  14.3   4.8    77 1013.5
## 8659:   95     12     31     22    232    3.2    3.7    0.2  12.5   6.1    82 1014.3
## 8660:   95     12     31     23    226    3.3    4.1    0.2  14.3   6.4    77 1014.2
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.2 999.0   999 20.0
## 2:    3.5 999.0   999 21.7
## 3:    4.1 999.0   999 22.6
## 4:    5.1 999.0   999 21.7
## 5:    4.8 999.0   999 22.9
## ----
## 8656:   3.0   5.5   999   7.4
## 8657:   3.2   5.5   999   7.2
## 8658:   3.2   5.5   999   7.7
## 8659:   3.6   5.5   999   8.2
## 8660:   3.6   5.5   999   7.7
##
## $`1996`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    96      1      1      0    218    2.9    3.4   0.16 12.50   6.36    86 1013.9
## 2:    96      1      1      1    225    2.8    3.2   0.17 12.50   7.35    82 1014.0
## 3:    96      1      1      2    234    1.9    2.3   0.18 12.50   7.21    74 1013.5
## 4:    96      1      1      3    233    2.8    3.8   0.17 12.50   6.93    77 1013.3
## 5:    96      1      1      4    263    3.2    3.8   0.15 12.50   7.36    89 1013.4
## ----
## 8948:   96     12     31     19    337    7.6    9.8   0.86  4.55   3.85    49 1021.2
## 8949:   96     12     31     20    334    8.0   10.7   1.00  5.26   3.83    49 1021.1
## 8950:   96     12     31     21    326    8.6   10.5   1.23  5.00   4.09    48 1021.9
## 8951:   96     12     31     22    323   11.0   13.6   1.31  5.88   4.19    47 1023.1
## 8952:   96     12     31     23    332    9.4   12.2   1.32  5.26   4.13    47 1024.1
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:    3.6   5.5   999   99
## 2:    3.5   5.5   999   99
## 3:    3.2   5.5   999   99
## 4:    3.5   5.5   999   99
## 5:    3.2   5.5   999   99
## ----
## 8948:  -7.0   6.3   999   99
## 8949:  -7.1   6.3   999   99
## 8950:  -7.2   6.3   999   99
## 8951:  -7.6   6.3   999   99
## 8952:  -8.0   6.3   999   99
##
```



```
## $`1997`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    97      1      1      0    322    10.7    13.7    1.27    4.17    4.13      5    1024.9
## 2:    97      1      1      1    312    10.8    13.8    1.41    5.26    4.14     40    1026.2
## 3:    97      1      1      2    323    11.4    14.0    1.43    4.55    4.25    355    1026.8
## 4:    97      1      1      3    336    11.4    14.2    1.57    5.56    4.40     42    1027.3
## 5:    97      1      1      4    333    10.9    14.0    1.83    6.67    4.76     45    1027.6
## ----
## 5708:   97     12     31     19    274    10.4    13.5    1.06    3.85    4.07    999    1004.0
## 5709:   97     12     31     20    290     9.7    12.5    1.02    12.50    4.03    999    1005.6
## 5710:   97     12     31     21    289    10.1    12.0    1.04    11.11    4.27    999    1007.7
## 5711:   97     12     31     22    305    10.4    13.4    0.91    12.50    3.93    999    1009.7
## 5712:   97     12     31     23    304    13.6    16.9    1.28    4.00    3.96    999    1011.5
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -8.3     6.3    999     99
## 2:   -9.1     6.3    999     99
## 3:   -9.2     6.3    999     99
## 4:   -9.7     6.3    999     99
## 5:  -10.6     6.3    999     99
## ----
## 5708:  -1.5     5.9    999     99
## 5709:  -1.8     5.6    999     99
## 5710:  -3.1     5.5    999     99
## 5711:  -3.7     5.2    999     99
## 5712:  -4.8     5.1    999     99
##
## $`1998`
##      YY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:    98      1      1      0    295    10.8    15.4    1.34    4.35    4.24    999    1014.0
## 2:    98      1      1      1    287    10.6    13.9    1.29    4.35    4.11    999    1015.4
## 3:    98      1      1      2    286    11.7    15.5    1.12    4.00    4.00    999    1016.3
## 4:    98      1      1      3    286    11.9    15.0    1.04    4.00    3.94    999    1017.1
## 5:    98      1      1      4    295    12.2    14.7    1.26    4.17    4.02    999    1017.9
## ----
## 8780:   98     12     31     19    242     6.9     9.1    0.56    11.11    3.56    999    1017.8
## 8781:   98     12     31     20    242     6.6     8.6    0.53     2.86    3.58    999    1017.7
## 8782:   98     12     31     21    229     6.2     8.5    0.43     2.94    3.48    999    1017.9
## 8783:   98     12     31     22    207     5.6     7.7    0.39    10.00    4.25    999    1017.7
## 8784:   98     12     31     23    213     5.2     7.5    0.35    11.11    4.81    999    1017.4
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -5.9     5.1    999     99
## 2:   -6.5     5.1    999     99
## 3:   -7.0     5.2    999     99
## 4:   -7.6     5.6    999     99
## 5:   -8.1     5.6    999     99
## ----
## 8780:  -5.5     5.9    999     99
## 8781:  -5.1     5.8    999     99
## 8782:  -4.6     5.6    999     99
## 8783:  -4.4     5.8    999     99
## 8784:  -4.5     5.6    999     99
##
## $`1999`
##      YYYY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1:  1999      1      1      0    221     5.4     7.2    0.33    11.11    5.25    999    1017.4
## 2:  1999      1      1      1    218     5.6     7.3    0.31    11.11    5.51    999    1016.5
## 3:  1999      1      1      2    226     5.7     7.0    0.32    12.50    6.53    999    1015.8
## 4:  1999      1      1      3    228     5.7     7.3    0.31    11.11    6.17    999    1015.3
## 5:  1999      1      1      4    237     5.9     7.7    0.39    11.11    5.02    999    1015.0
## ----
## 8344:  1999     12     31     19    340     4.9     6.5    0.65     9.09    3.92    999    1017.2
## 8345:  1999     12     31     20    350     4.5     5.9    0.58     4.17    4.04    999    1017.4
## 8346:  1999     12     31     21    346     3.2     4.6    0.58    11.11    4.24    999    1018.0
## 8347:  1999     12     31     22    360     3.3     4.1    0.51    10.00    4.21    999    1018.1
## 8348:  1999     12     31     23     5     1.2     2.3    0.51    10.00    4.40    999    1018.7
##      ATMP      WTMP      DEWP      VIS
##      <num> <num> <num> <num>
## 1:   -4.3     5.6    999.0     99
## 2:   -4.0     5.7    999.0     99
## 3:   -3.9     5.7    999.0     99
## 4:   -3.9     5.7    999.0     99
## 5:   -3.8     5.6    999.0     99
## ----
## 8344:   0.1     5.9   -8.0     99
## 8345:   0.5     5.9   -8.2     99
## 8346:   0.8     5.9   -5.5     99
## 8347:   0.9     5.9   -4.3     99
## 8348:   1.2     5.9   -3.5     99
##
```

```

## $`2000`
##      V1    V2    V3    V4    V5    V6    V7    V8    V9    V10   V11   V12
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2000    1    1    0  315  0.8  1.5  0.54 10.00  4.55  999 1019.2
## 2: 2000    1    1    1  271  0.7  1.9  0.53  4.55  4.61  999 1020.3
## 3: 2000    1    1    2  232  2.3  3.1  0.52  4.76  4.78  999 1020.4
## 4: 2000    1    1    3  236  2.9  3.8  0.52 10.00  4.86  999 1021.0
## 5: 2000    1    1    4  232  4.1  4.9  0.50 10.00  5.00  999 1021.2
## ----
## 5108: 2000    7    31   19   59  3.3  3.8  0.61  9.09  4.68  999 1024.1
## 5109: 2000    7    31   20   45  3.9  4.7  0.59  9.09  4.94  999 1023.6
## 5110: 2000    7    31   21   56  3.8  4.5  0.53  8.33  4.71  999 1023.5
## 5111: 2000    7    31   22   63  4.3  5.1  0.56  8.33  4.94  999 1023.4
## 5112: 2000    7    31   23   56  4.2  5.0  0.61  8.33  5.20  999 1022.8
##      V13   V14   V15   V16
##      <num> <num> <num> <num>
## 1:   1.1   5.9  -3.6   99
## 2:   1.2   5.9  -3.6   99
## 3:   1.5   5.8  -3.3   99
## 4:   1.3   5.9  -3.6   99
## 5:   0.9   5.9  -4.0   99
## ----
## 5108: 17.2  17.6  16.0   99
## 5109: 17.2  17.6  16.0   99
## 5110: 17.2  17.6  15.9   99
## 5111: 17.2  17.6  16.0   99
## 5112: 17.2  17.6  16.0   99
##
## $`2001`
##      YYYY    MM    DD    hh    WD   WSPD   GST   WVHT   DPD   APD   MWD   BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2001    1    1    0  255  13.2  16.4  1.49  4.76  4.30  999 1001.2
## 2: 2001    1    1    1  255  14.3  17.5  1.50  4.35  4.17  999 1002.0
## 3: 2001    1    1    2  263  15.8  19.9  1.68  4.76  4.31  999 1002.4
## 4: 2001    1    1    3  267  14.4  17.5  1.64  5.00  4.37  999 1003.6
## 5: 2001    1    1    4  270  13.9  17.6  1.55  4.76  4.21  999 1004.6
## ----
## 8756: 2001   12   31   19  248   9.3  11.1  0.67  3.45  3.21  999 1009.9
## 8757: 2001   12   31   20  242   8.9  10.7  0.69  3.23  3.15  999 1010.3
## 8758: 2001   12   31   21  240  10.5  99.0 99.00 99.00 99.00 999 9999.0
## 8759: 2001   12   31   22  244   8.6  99.0 99.00 99.00 99.00 999 9999.0
## 8760: 2001   12   31   23  244   8.4  11.3  0.77  3.57  3.31  999 1011.9
##      ATMP  WTMP  DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num>
## 1:  -1.5   4.3  -7.6   99   99
## 2:  -1.9   4.3  -7.1   99   99
## 3:  -1.9   4.3  -7.3   99   99
## 4:  -2.1   4.3  -7.2   99   99
## 5:  -2.2   4.4  -8.3   99   99
## ----
## 8756:  -0.3   7.0  -8.7   99   99
## 8757:   0.1   7.0  -8.9   99   99
## 8758: 999.0 999.0 999.0 99   99
## 8759: 999.0 999.0 999.0 99   99
## 8760:   0.1   6.7  -8.9   99   99
##
## $`2002`
##      YYYY    MM    DD    hh    WD   WSPD   GST   WVHT   DPD   APD   MWD   BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2002    1    1    0  227   8.5  10.4  0.60  3.23  3.13  999 1012.9
## 2: 2002    1    1    1  234   9.5  11.5  0.66  3.13  3.09  999 1013.4
## 3: 2002    1    1    2  232   9.7  12.4  0.73  3.57  3.26  999 1013.9
## 4: 2002    1    1    3  255  10.5  12.5  0.80  3.70  3.37  999 1013.5
## 5: 2002    1    1    4  261  10.1  12.4  0.79  3.70  3.45  999 1013.4
## ----
## 8756: 2002   12   31   19  183   4.5  5.8  0.96  5.56  4.16  999 1015.0
## 8757: 2002   12   31   20  313   2.0  2.4  0.93  4.55  4.31  999 1014.6
## 8758: 2002   12   31   21  316   2.0  2.5  0.98  6.25  4.62  999 1014.7
## 8759: 2002   12   31   22  330   2.6  3.2  0.99  6.67  4.98  999 1014.3
## 8760: 2002   12   31   23  322   0.8  1.8  1.11  7.14  5.12  999 1013.6
##      ATMP  WTMP  DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num>
## 1:   0.0   6.7  -8.4   99   99
## 2:   0.0   6.7  -8.3   99   99
## 3:  -0.5   6.7  -8.1   99   99
## 4:  -0.4   6.7  -8.1   99   99
## 5:  -0.4   6.7  -8.5   99   99
## ----
## 8756:   5.1   6.0   4.8   99   99
## 8757:   4.4   6.0   4.2   99   99
## 8758:   4.8   6.0   4.6   99   99
## 8759:   4.7   6.0   4.6   99   99
## 8760:   4.5   6.0   4.4   99   99
##

```

```

## $`2003`
##      YYYY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2003      1      1      0      153      0.6      1.2      0.99      6.67      5.03      999      1012.8
## 2: 2003      1      1      1      183      3.4      3.8      0.93      6.67      4.92      999      1012.6
## 3: 2003      1      1      2      180      4.2      5.0      0.89      6.25      4.91      999      1011.8
## 4: 2003      1      1      3      207      6.4      7.4      0.80      6.67      4.89      999      1011.1
## 5: 2003      1      1      4      204      7.3      8.2      0.70      6.67      4.73      999      1010.3
## ----
## 8755: 2003      12      31      19      276      5.4      6.5      0.48      3.23      3.09      999      1019.0
## 8756: 2003      12      31      20      237      3.7      4.3      0.28      2.86      3.03      999      1018.9
## 8757: 2003      12      31      21      208      3.0      3.6      0.18      2.50      3.24      999      1018.1
## 8758: 2003      12      31      22      185      4.3      5.2      0.00      0.00      0.00      999      1017.4
## 8759: 2003      12      31      23      161      4.6      5.3      0.00      0.00      0.00      999      1016.6
##      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num>
## 1: 4.7      6.0      4.6      99      99
## 2: 4.7      6.0      4.6      99      99
## 3: 5.0      6.0      4.9      99      99
## 4: 5.9      6.0      5.8      99      99
## 5: 6.0      6.0      5.3      99      99
## ----
## 8755: 5.5      5.2      -1.4      99      99
## 8756: 5.7      5.2      0.0      99      99
## 8757: 5.6      5.2      0.7      99      99
## 8758: 5.9      5.2      0.0      99      99
## 8759: 5.5      5.2      -0.3      99      99
##
## $`2004`
##      YYYY      MM      DD      hh      WD      WSPD      GST      WVHT      DPD      APD      MWD      BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 2004      1      1      0      184      8.6      10.5      0.17      2.50      3.03      999      1014.9
## 2: 2004      1      1      1      214      9.7      11.7      0.43      2.78      2.89      999      1014.2
## 3: 2004      1      1      2      227      9.9      12.2      99.00      99.00      99.00      999      1013.8
## 4: 2004      1      1      3      232      11.8      14.5      0.96      3.45      3.34      999      1013.0
## 5: 2004      1      1      4      232      9.2      11.3      1.00      3.57      3.43      999      1013.2
## ----
## 8757: 2004      12      31      19      153      7.5      8.8      0.96      4.35      3.85      999      1025.9
## 8758: 2004      12      31      20      165      6.2      7.4      0.96      4.76      3.92      999      1025.6
## 8759: 2004      12      31      21      172      6.4      7.2      0.96      4.35      4.00      999      1025.0
## 8760: 2004      12      31      22      175      8.1      9.9      0.87      4.76      3.91      999      1023.8
## 8761: 2004      12      31      23      176      9.2      10.4      0.88      4.17      3.69      999      1023.0
##      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num>
## 1: 5.2      5.2      999.0      99      99
## 2: 5.1      5.2      0.0      99      99
## 3: 4.8      5.2      -0.8      99      99
## 4: 5.1      5.2      -0.2      99      99
## 5: 5.2      5.2      -0.7      99      99
## ----
## 8757: 6.3      6.3      4.9      99      99
## 8758: 6.6      6.3      5.4      99      99
## 8759: 7.4      6.3      5.9      99      99
## 8760: 7.4      6.3      6.3      99      99
## 8761: 7.4      6.3      6.7      99      99
##
## $`2005`
##      YYYY      MM      DD      hh      mm      WD      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2005      1      1      0      0      187      9.0      10.1      0.85      3.23      3.58      999
## 2: 2005      1      1      1      0      193      8.3      10.5      0.78      3.85      3.57      999
## 3: 2005      1      1      2      0      212      7.0      8.9      0.90      3.13      3.50      999
## 4: 2005      1      1      3      0      210      8.8      11.2      1.00      4.17      3.70      999
## 5: 2005      1      1      4      0      237      6.8      8.0      1.00      3.33      3.79      999
## ----
## 8704: 2005      12      31      19      0      56      4.3      5.7      0.98      11.11      5.64      999
## 8705: 2005      12      31      20      0      56      3.4      4.5      1.06      10.00      5.49      999
## 8706: 2005      12      31      21      0      52      2.9      4.7      1.07      11.11      5.65      999
## 8707: 2005      12      31      22      0      59      5.1      6.7      1.03      11.11      5.49      999
## 8708: 2005      12      31      23      0      52      4.5      7.2      1.00      11.11      5.28      999
##      BAR      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1022.6      7.6      6.3      7.1      99      99
## 2: 1022.1      8.3      6.3      6.1      99      99
## 3: 1022.0      8.2      6.3      5.2      99      99
## 4: 1021.1      8.7      6.3      5.1      99      99
## 5: 1021.4      7.9      6.3      5.0      99      99
## ----
## 8704: 1011.0      0.4      5.8      999.0      99      99
## 8705: 1011.1      0.4      5.9      999.0      99      99
## 8706: 1011.6      0.8      5.9      -4.1      99      99
## 8707: 1011.1      1.1      5.9      -2.7      99      99
## 8708: 1011.4      1.4      5.8      -0.8      99      99
##

```

```
## $`2006`
##      YYYY   MM   DD   hh   mm   WD   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2006     1     1     0     0    74    5.3    6.1    0.92  11.11  5.01  999
## 2: 2006     1     1     1     0    83    4.9    6.0    0.89  10.00  5.09  999
## 3: 2006     1     1     2     0    82    5.3    6.9    0.84  11.11  4.78  999
## 4: 2006     1     1     3     0    62    8.9   10.9    0.99  11.11  4.32  999
## 5: 2006     1     1     4     0    56    9.8   11.5    1.40  4.55  4.16  999
## ----
## 8719: 2006    12    31    19     0   305    4.5    6.0    0.57  4.55  3.49  999
## 8720: 2006    12    31    20     0   321    3.2    4.8    0.47  4.55  3.69  999
## 8721: 2006    12    31    21     0   276    3.1    5.0    0.40  4.35  4.09  999
## 8722: 2006    12    31    22     0   313    3.3    4.4    0.41  5.88  4.26  999
## 8723: 2006    12    31    23     0   303    2.8    3.7    0.39  5.56  4.30  999
##      BAR   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1011.8    0.6    5.8   -0.7    99    99
## 2: 1011.5    0.7    5.8    0.4    99    99
## 3: 1010.7    1.3    5.8    0.4    99    99
## 4: 1009.6    1.7    5.8    1.3    99    99
## 5: 1009.3    1.1    5.8    0.4    99    99
## ----
## 8719: 1028.8    2.2    7.1  999.0    99    99
## 8720: 1028.8    2.7    7.1  999.0    99    99
## 8721: 1028.9    3.2    7.1  999.0    99    99
## 8722: 1029.0    3.5    7.1  999.0    99    99
## 8723: 1028.9    3.8    7.1  999.0    99    99
##
## $`2007`
##      #YY   MM   DD   hh   mm   WDIR   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2007     1     1     0     0   209    2.2    3.1    0.39  5.00  4.32  999
## 2: 2007     1     1     1     0   184    1.6    2.3    0.37  4.76  4.33  999
## 3: 2007     1     1     2     0   173    2.8    4.0    0.33  4.17  4.24  999
## 4: 2007     1     1     3     0   183    5.6    6.7    0.32  4.17  4.19  999
## 5: 2007     1     1     4     0   201    6.0    7.1    0.32  2.50  3.38  999
## ----
## 8690: 2007    12    31    19     0   271   11.7   13.9    1.47  7.69  4.75  999
## 8691: 2007    12    31    20     0   280   11.8   14.9    1.68  7.69  4.62  999
## 8692: 2007    12    31    21     0   271   12.8   16.1    1.58  8.33  4.49  999
## 8693: 2007    12    31    22     0   278   12.1   14.5    1.50  4.35  4.44  999
## 8694: 2007    12    31    23     0   272   12.7   15.5    1.42  4.35  4.29  999
##      PRES   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1029.0    3.6    7.1  999.0    99    99
## 2: 1028.8    3.5    7.1  999.0    99    99
## 3: 1028.9    3.6    7.1  999.0    99    99
## 4: 1028.3    3.1    7.1  999.0    99    99
## 5: 1028.7    2.8    7.1  999.0    99    99
## ----
## 8690: 1007.4    4.2    4.0    0.3    99    99
## 8691: 1008.9    4.4    4.3   -0.2    99    99
## 8692: 1010.6    4.7    4.3   -0.9    99    99
## 8693: 1012.2    4.7    4.4   -1.1    99    99
## 8694: 1013.7    4.3    4.6   -1.3    99    99
##
## $`2008`
##      #YY   MM   DD   hh   mm   WDIR   WSPD   GST   WVHT   DPD   APD   MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2008     1     1     0     0   274   11.6   14.1    1.40  4.17  4.17  999
## 2: 2008     1     1     1     0   282   10.6   12.9    1.23  4.17  4.02  999
## 3: 2008     1     1     2     0   284    9.5   11.5    1.05  4.00  3.99  999
## 4: 2008     1     1     3     0   282    7.3    8.7    0.85  3.45  3.79  999
## 5: 2008     1     1     4     0   268    4.9    6.0    0.64  7.69  4.09  999
## ----
## 8741: 2008    12    31    18    50   16   14.4   16.9    2.33  5.88  5.01  999
## 8742: 2008    12    31    19    50   19   14.5   16.9    2.67  6.25  5.26  999
## 8743: 2008    12    31    20    50    4   13.6   16.2    3.07  6.67  5.68  999
## 8744: 2008    12    31    21    50   335   13.5   16.2    2.53  7.14  5.27  999
## 8745: 2008    12    31    22    50   329   13.7   16.4    2.43  7.14  5.24  999
##      PRES   ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1015.3    4.0    4.7   -1.6    99    99
## 2: 1016.4    3.6    4.7   -1.7    99    99
## 3: 1017.8    3.3    4.8   -1.6    99    99
## 4: 1018.9    3.2    4.8   -1.7    99    99
## 5: 1019.5    2.8    4.8   -1.4    99    99
## ----
## 8741: 996.8   -1.9    5.6   -2.2    99    99
## 8742: 997.2   -3.0    5.6   -3.2    99    99
## 8743: 997.9   -2.9    5.6   -4.1    99    99
## 8744: 1000.0  -4.4    5.6   -5.2    99    99
## 8745: 1001.3  -4.9    5.6   -5.9    99    99
##
```

```
## $`2009`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2008      12      31      23      50      326    14.4    17.3    2.52    7.14    5.27    999
## 2: 2009       1       1       0      50      316    16.7    19.7    2.65    7.14    5.05    999
## 3: 2009       1       1       1      50      307    15.7    19.0    3.01    6.25    5.27    999
## 4: 2009       1       1       2      50      315    17.0    20.7    2.65    5.88    5.19    999
## 5: 2009       1       1       3      50      315    16.5    20.8    3.05    5.56    5.34    999
## ----
## 8728: 2009      12      31      18      50      274     4.2     5.7    0.42   11.43    3.61    999
## 8729: 2009      12      31      19      50      258     3.6     4.7    0.39   11.43    3.38    999
## 8730: 2009      12      31      20      50       55     0.4     1.3    0.35   10.81    4.14    999
## 8731: 2009      12      31      21      50      339     1.3     2.2    0.34   12.12    5.39    999
## 8732: 2009      12      31      22      50       15     0.7     1.7    0.35   12.12    5.42    999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1002.4    -5.3     5.6    -6.8     99     99
## 2: 1003.2    -7.7     5.6    -9.6     99     99
## 3: 1003.9    -8.7     5.6   -12.0     99     99
## 4: 1004.8   -10.1     5.5   -13.2     99     99
## 5: 1005.5   -10.6     5.5   -13.2     99     99
## ----
## 8728: 1021.8    -0.8     6.0    -1.6     99     99
## 8729: 1022.1    -0.8     6.0    -1.4     99     99
## 8730: 1021.0    -0.5     5.9    -1.1     99     99
## 8731: 1021.2    -0.2     5.9    -0.9     99     99
## 8732: 1020.8     0.5     5.9     0.3     99     99
##
## $`2010`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2009      12      31      23      50      37     1.2     2.0    0.35   12.12    5.43    999
## 2: 2010       1       1       0      50      32     2.5     3.5    0.35   12.12    5.02    999
## 3: 2010       1       1       1      50       2     4.1     5.1    0.38   12.90    5.19    999
## 4: 2010       1       1       2      50       4     4.3     5.5    0.38   12.12    4.94    999
## 5: 2010       1       1       3      50      355     5.4     6.5    0.41   13.79    3.62    999
## ----
## 7840: 2010      12      31      18      50      216     2.2     2.4    0.18   99.00    3.21    999
## 7841: 2010      12      31      19      50      221     4.0     4.5    0.17   99.00    4.11    999
## 7842: 2010      12      31      20      50      203     2.8     3.3    0.17   99.00    3.85    999
## 7843: 2010      12      31      21      50      190     4.1     4.6    0.16   99.00    3.85    999
## 7844: 2010      12      31      22      50      213     3.7     4.2    0.17   99.00    3.77    999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1020.0     1.0     5.9    -0.2     99     99
## 2: 1019.4     1.5     6.0    -0.6     99     99
## 3: 1018.4     1.4     6.0    -0.7     99     99
## 4: 1017.8     1.1     6.0    -0.8     99     99
## 5: 1016.8     0.8     6.1    -0.6     99     99
## ----
## 7840: 1018.4     7.2     6.5     3.2     99     99
## 7841: 1018.6     7.5     6.5     3.0     99     99
## 7842: 1018.6     7.4     6.4     3.8     99     99
## 7843: 1018.3     7.0     6.3     4.0     99     99
## 7844: 1018.5     7.0     6.2     3.5     99     99
##
## $`2011`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2010      12      31      23      50      225     3.8     4.2    0.16   99.00    4.05    999
## 2: 2011       1       1       0      50      234     4.9     5.7    0.19   99.00    2.74    999
## 3: 2011       1       1       1      50      234     5.8     7.1    0.25   99.00    2.56    999
## 4: 2011       1       1       2      50      233     5.7     6.8    0.39    2.47    2.58    999
## 5: 2011       1       1       3      50      227     6.4     7.2    0.43    2.47    2.57    999
## ----
## 8742: 2011      12      31      18      50      180     0.0     0.1   99.00   99.00   99.00    999
## 8743: 2011      12      31      19      50      281     2.4     3.8   99.00   99.00   99.00    999
## 8744: 2011      12      31      20      50      287     2.4     3.7   99.00   99.00   99.00    999
## 8745: 2011      12      31      21      50      286     2.8     4.5   99.00   99.00   99.00    999
## 8746: 2011      12      31      22      50      289     2.6     3.7   99.00   99.00   99.00    999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1018.7     6.8     6.2     3.5     99     99
## 2: 1018.5     6.4     6.2     2.5     99     99
## 3: 1018.3     6.1     6.1     2.3     99     99
## 4: 1018.0     5.8     6.1     1.7     99     99
## 5: 1017.8     5.7     6.1     1.3     99     99
## ----
## 8742: 1008.4     4.9     5.7     4.2     99     99
## 8743: 1008.0     5.4     6.1     4.3     99     99
## 8744: 1008.1     5.7     9.1     4.2     99     99
## 8745: 1008.9     5.7     7.4     4.3     99     99
## 8746: 1009.5     5.6     6.4     4.8     99     99
##
```

```
## $`2012`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2012      6      30      23      50      253      3.4      4.2      0.52      9.09      5.33      86
## 2: 2012      7       1       0      50      198      3.5      4.1      0.53      7.69      5.41      107
## 3: 2012      7       1       1      50      199      4.0      4.7      0.48     10.00      5.60      102
## 4: 2012      7       1       2      50      218      3.9      4.4      0.45      9.09      5.20      87
## 5: 2012      7       1       3      50      222      4.5      4.8      0.41      7.69      4.68     100
## ----
## 4405: 2012     12      31      18      50      277     11.6     14.2      0.95      4.00      3.61     258
## 4406: 2012     12      31      19      50      271     10.9     13.3      0.90      4.17      3.54     266
## 4407: 2012     12      31      20      50      274      9.6     11.1      0.91      3.85      3.60     273
## 4408: 2012     12      31      21      50      277     10.0     12.2      0.84      3.70      3.53     267
## 4409: 2012     12      31      22      50      257      7.4      9.7      0.65      3.70      3.36     279
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1005.4     23.2     18.2     15.7      99      99
## 2: 1005.7     22.0     18.2     16.8      99      99
## 3: 1006.1     21.6     18.1     17.8      99      99
## 4: 1006.1     21.6     18.0     17.7      99      99
## 5: 1006.5     21.5     17.7     17.8      99      99
## ----
## 4405: 1012.2      1.6      7.7     -3.6      99      99
## 4406: 1012.2      1.3      7.8     -3.9      99      99
## 4407: 1012.3      1.6      7.8     -3.8      99      99
## 4408: 1012.1      2.0      7.8     -3.7      99      99
## 4409: 1011.5      2.0      7.8     -4.1      99      99
##
## $`2013`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2012      12      31      23      50      234      8.5     10.2      0.42      3.33      3.14     279
## 2: 2013       1       1       0      50      246      9.0     10.9      0.52      2.86      2.94     251
## 3: 2013       1       1       1      50      243      7.3      9.4      0.50      3.33      3.05     237
## 4: 2013       1       1       2      50      252     10.5     12.4      0.50      3.03      2.99     244
## 5: 2013       1       1       3      50      256     10.9     13.0      0.65      3.70      3.28     265
## ----
## 8205: 2013     12      31      18      50      267      5.1      7.1      0.59     10.81      4.03      81
## 8206: 2013     12      31      19      50      276      4.4      6.9      0.57     10.00      4.33      86
## 8207: 2013     12      31      20      50      278      5.6      7.2      0.55     10.00      4.48      97
## 8208: 2013     12      31      21      50      254      6.7      9.2      0.52     10.81      4.59      67
## 8209: 2013     12      31      22      50      257      8.4     11.0      0.65     10.00      3.79      79
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1011.6      1.5      7.7     -3.7      99      99
## 2: 1010.8      1.5      7.7     -4.1      99      99
## 3: 1010.0      1.8      7.7     -4.0      99      99
## 4: 1009.0      2.4      7.7     -3.8      99      99
## 5: 1008.1      2.6      7.7     -3.8      99      99
## ----
## 8205: 1017.5     -5.8      5.9    -14.8      99      99
## 8206: 1017.4     -4.8      5.8    -14.6      99      99
## 8207: 1018.2     -3.9      5.8    -13.3      99      99
## 8208: 1018.6     -2.8      5.7    -12.0      99      99
## 8209: 1019.3     -2.0      5.8    -10.0      99      99
##
## $`2014`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2013      12      31      23      50      255      6.5     10.1      0.66      3.45      3.54     258
## 2: 2014       1       1       0      50      246      7.4     10.1      0.63      3.23      3.56     264
## 3: 2014       1       1       1      50      246      9.7     11.7      0.55      3.13      3.33     276
## 4: 2014       1       1       2      50      275     11.1     14.5      0.78      3.45      3.43     270
## 5: 2014       1       1       3      50      277     10.7     15.2      0.94      3.85      3.46     262
## ----
## 8749: 2014     12      31      18      50      289      6.1      8.6      0.38      2.86      2.87     288
## 8750: 2014     12      31      19      50      303      5.6      8.4      0.48      3.23      3.03     273
## 8751: 2014     12      31      20      50      299      5.1      7.8      0.50      3.23      3.04     285
## 8752: 2014     12      31      21      50      298      4.3      6.9      0.46      3.33      3.04     286
## 8753: 2014     12      31      22      50      282      5.7      8.0      0.45      3.23      3.04     287
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1019.2     -2.1      5.8     -9.6      99      99
## 2: 1019.2     -2.2      5.8     -8.4      99      99
## 3: 1019.8     -1.9      5.9     -7.3      99      99
## 4: 1019.6     -1.7      5.9     -8.3      99      99
## 5: 1020.2     -2.1      5.9     -9.4      99      99
## ----
## 8749: 1022.9     -2.1      5.5    999.0      99      99
## 8750: 1023.1     -2.1      5.5    999.0      99      99
## 8751: 1023.2     -1.8      5.6    999.0      99      99
## 8752: 1023.0     -2.1      5.7    999.0      99      99
## 8753: 1023.2     -1.9      5.7    999.0      99      99
##
```

```
## $`2015`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2014      12      31      23      50      287      4.9      8.3      0.44      3.23      3.06      281
## 2: 2015       1       1       0      50      280      4.8      7.7      0.39      3.03      2.91      283
## 3: 2015       1       1       1      50      275      4.1      5.4      0.35      2.86      2.98      278
## 4: 2015       1       1       2      50      236      5.3      6.9      0.27      2.86      2.82      277
## 5: 2015       1       1       3      50      220      4.8      6.9      0.20      99.00      2.77      999
## ----
## 8745: 2015      12      31      18      50      298      7.6      8.8      1.23      10.00      5.78      93
## 8746: 2015      12      31      19      50      310      6.4      8.1      1.23      10.00      5.43      100
## 8747: 2015      12      31      20      50      284      7.7      9.8      1.22      10.81      5.55      74
## 8748: 2015      12      31      21      50      280      8.8      10.6      1.25      10.00      5.28      94
## 8749: 2015      12      31      22      50      278      10.2      12.1      1.29      10.00      5.24      81
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1022.9      -2.3      5.7      999.0      99      99
## 2: 1022.7      -2.3      5.7      999.0      99      99
## 3: 1022.2      -2.5      5.7      999.0      99      99
## 4: 1021.9      -2.3      5.6      999.0      99      99
## 5: 1021.2      -2.7      5.6      999.0      99      99
## ----
## 8745: 1013.2      7.2      8.7      3.7      99      99
## 8746: 1013.4      6.8      8.7      3.4      99      99
## 8747: 1014.1      7.0      8.7      2.5      99      99
## 8748: 1014.8      6.5      8.6      1.7      99      99
## 8749: 1014.7      6.5      8.6      1.1      99      99
##
## $`2016`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2015      12      31      23      50      280      8.8      10.6      1.06      10.00      4.83      83
## 2: 2016       1       1       0      50      275      9.9      12.0      1.01      10.00      4.60      85
## 3: 2016       1       1       1      50      266      8.9      10.4      1.09      10.00      4.49      83
## 4: 2016       1       1       2      50      274      9.3      10.7      1.04      10.00      4.42      81
## 5: 2016       1       1       3      50      279      9.8      11.5      1.08      9.09      4.56      87
## ----
## 8691: 2016      12      31      18      50      191      7.5      9.1      0.52      10.81      3.31      56
## 8692: 2016      12      31      19      50      188      7.5      9.5      0.58      10.81      3.30      336
## 8693: 2016      12      31      20      50      182      7.6      9.3      0.57      11.43      3.41      320
## 8694: 2016      12      31      21      50      174      9.1      11.4      0.71      10.81      3.52      80
## 8695: 2016      12      31      22      50      175      8.8      10.2      0.74      4.00      3.60      134
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1015.1      6.4      8.6      0.3      99      99
## 2: 1015.2      6.3      8.5     -0.4      99      99
## 3: 1015.4      6.0      8.5      0.3      99      99
## 4: 1015.3      5.7      8.5     -0.3      99      99
## 5: 1015.3      5.5      8.4     -0.4      99      99
## ----
## 8691: 1017.1      2.0      8.2      999.0      99      99
## 8692: 1016.8      2.4      8.2      999.0      99      99
## 8693: 1016.3      3.1      8.2      999.0      99      99
## 8694: 1015.4      3.7      8.1      999.0      99      99
## 8695: 1015.1      4.2      8.1      999.0      99      99
##
## $`2017`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2016      12      31      23      50      177      9.1      10.7      0.82      10.81      3.84      93
## 2: 2017       1       1       0      50      177      7.3      8.8      0.87      10.81      3.94      75
## 3: 2017       1       1       1      50      174      7.4      8.7      0.85      4.00      3.95      132
## 4: 2017       1       1       2      50      186      8.6      10.7      0.85      4.35      3.92      135
## 5: 2017       1       1       3      50      207      7.9      10.0      0.94      12.12      3.90      126
## ----
## 8692: 2017      12      31      18      50      297      12.4      15.0      1.22      4.55      3.81      306
## 8693: 2017      12      31      19      50      294      12.6      15.7      1.15      4.35      3.81      312
## 8694: 2017      12      31      20      50      294      11.8      16.8      1.29      4.55      3.89      302
## 8695: 2017      12      31      21      50      293      12.8      17.0      1.36      4.55      3.97      299
## 8696: 2017      12      31      22      50      298      12.0      15.1      1.26      4.76      3.91      301
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1014.5      5.3      8.1      999      99      99
## 2: 1013.7      6.0      8.1      999      99      99
## 3: 1012.7      7.0      8.2      999      99      99
## 4: 1011.8      7.6      8.2      999      99      99
## 5: 1010.8      7.2      8.2      999      99      99
## ----
## 8692: 1017.4     -9.7      6.5      999      99      99
## 8693: 1018.5     -9.5      6.5      999      99      99
## 8694: 1019.7     -9.3      6.5      999      99      99
## 8695: 1019.7     -9.2      6.5      999      99      99
## 8696: 1020.3     -9.4      6.5      999      99      99
##
```

```

## $`2018`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2017      12      31      23      50      302      13.3      16.7      1.19      4.35      3.76      301
## 2: 2018       1       1       0      50      294      11.5      15.0      1.30      4.76      3.97      301
## 3: 2018       1       1       1      50      295      12.0      15.3      1.25      4.35      3.84      304
## 4: 2018       1       1       2      50      305      10.5      14.2      1.18      4.17      3.74      312
## 5: 2018       1       1       3      50      314      11.8      14.2      1.14      3.85      3.65      319
## ----
## 8656: 2018      12      31      18      50      157      4.5      5.1      0.44      13.79      4.54      74
## 8657: 2018      12      31      19      50      155      5.7      7.0      0.43      14.81      3.84      78
## 8658: 2018      12      31      20      50      168      8.4      9.5      0.55      13.79      3.63      169
## 8659: 2018      12      31      21      50      165      8.3      9.7      0.71      3.57      3.70      140
## 8660: 2018      12      31      22      50      157      7.9      9.6      0.67      3.85      3.59      137
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1020.6 -10.3      6.5 999.0      99      99
## 2: 1020.9 -10.3      6.5 999.0      99      99
## 3: 1020.8 -11.1      6.5 999.0      99      99
## 4: 1021.1 -11.8      6.5 999.0      99      99
## 5: 1021.1 -12.2      6.5 999.0      99      99
## ----
## 8656: 1026.4      5.7      7.0      0.2      99      99
## 8657: 1025.7      6.0      7.0      1.1      99      99
## 8658: 1024.8      5.9      7.0     -0.4      99      99
## 8659: 1024.6      5.6      7.0     -0.2      99      99
## 8660: 1024.9      5.3      7.0     -0.5      99      99
##
## $`2019`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2019       1       1       0      50      158      9.6      11.5      0.81      4.00      3.77      135
## 2: 2019       1       1       1      50      136      10.6      12.3      0.99      4.35      3.95      131
## 3: 2019       1       1       2      50      143      11.1      13.3      1.22      4.76      4.18      130
## 4: 2019       1       1       3      50      139      12.3      14.6      1.31      5.00      4.15      131
## 5: 2019       1       1       4      50      133      12.3      15.6      1.41      5.00      4.31      134
## ----
## 8609: 2019      12      31      18      50      330      6.9      8.4      3.45      10.00      7.47      99
## 8610: 2019      12      31      19      50      329      5.6      7.2      3.26      10.00      7.57      100
## 8611: 2019      12      31      20      50      294      4.0      5.6      3.00      10.81      7.62      90
## 8612: 2019      12      31      21      50      328      3.8      5.2      2.52      10.00      7.34      103
## 8613: 2019      12      31      22      50      298      6.3      8.8      2.83      10.00      8.00      96
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1023.7      3.6      7.0      1.5      99      99
## 2: 1021.0      4.1      7.0      1.7      99      99
## 3: 1019.3      4.1      7.0      2.6      99      99
## 4: 1017.3      4.2      7.0      3.3      99      99
## 5: 1014.8      5.0      7.0      4.4      99      99
## ----
## 8609: 999.3      3.1      7.1      3.1      99      99
## 8610: 999.5      3.2      7.1      3.2      99      99
## 8611: 1000.4      3.1      7.1      3.1      99      99
## 8612: 999.6      2.9      7.0      2.7      99      99
## 8613: 1000.4      3.2      6.9      2.3      99      99
##
## $`2020`
##      #YY      MM      DD      hh      mm      WDIR      WSPD      GST      WVHT      DPD      APD      MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
## 1: 2019      12      31      23      50      295      5.4      7.0      2.48      10.00      7.51      94
## 2: 2020       1       1       0      50      276      5.3      6.9      2.46      10.00      7.61      103
## 3: 2020       1       1       1      50      257      7.1      9.3      2.09      10.00      7.03      91
## 4: 2020       1       1       2      50      247      7.7      10.0      2.17      10.81      6.89      77
## 5: 2020       1       1       3      50      242      7.8      10.0      2.32      10.00      7.45      80
## ----
## 16099: 2020      12      31      23      10      300      8.0      9.8 99.00 99.00 99.00 999
## 16100: 2020      12      31      23      20      300      6.9      8.5 99.00 99.00 99.00 999
## 16101: 2020      12      31      23      30      301      7.1      9.2 99.00 99.00 99.00 999
## 16102: 2020      12      31      23      40      300      7.7      10.0 0.63 3.33 3.30 304
## 16103: 2020      12      31      23      50      300      8.1      10.0 99.00 99.00 99.00 999
##      PRES      ATMP      WTMP      DEWP      VIS      TIDE
##      <num> <num> <num> <num> <num> <num>
## 1: 1000.3      3.0      6.9      2.7      99      99
## 2: 1000.4      3.4      6.9      2.6      99      99
## 3: 1000.5      3.6      6.9      2.7      99      99
## 4: 999.9      3.9      6.8      2.9      99      99
## 5: 999.6      4.3      6.8      2.9      99      99
## ----
## 16099: 1022.9      5.3      7.3     -2.9      99      99
## 16100: 1023.1      5.4      7.3     -2.3      99      99
## 16101: 1023.1      5.3      7.3     -2.5      99      99
## 16102: 1023.4      5.2      7.3     -2.6      99      99
## 16103: 1023.8      5.2      7.3     -2.7      99      99
##

```



```
## $`2021`
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2021    1    1    0    0   302   7.9   9.8  99.00 99.00 99.00  999
##      2: 2021    1    1    0    10  301   7.8  10.1  99.00 99.00 99.00  999
##      3: 2021    1    1    0    20  301   8.1  10.1  99.00 99.00 99.00  999
##      4: 2021    1    1    0    30  305   7.3   9.0  99.00 99.00 99.00  999
##      5: 2021    1    1    0    40  302   7.2   9.4   0.57  3.45  3.22  294
##      ---
## 51559: 2021    12    31    23    10  160   1.8   2.4  99.00 99.00 99.00  999
## 51560: 2021    12    31    23    20  174   2.0   2.5  99.00 99.00 99.00  999
## 51561: 2021    12    31    23    30  201   2.4   3.0  99.00 99.00 99.00  999
## 51562: 2021    12    31    23    40  204   2.4   2.9   0.43  10.00  5.98  111
## 51563: 2021    12    31    23    50  221   2.4   3.3  99.00 99.00 99.00  999
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1024.1   5.2   7.4  -3.0   99   99
##      2: 1024.2   5.1   7.4  -3.0   99   99
##      3: 1024.4   5.1   7.4  -2.8   99   99
##      4: 1024.6   5.1   7.3  -2.8   99   99
##      5: 1024.7   5.0   7.3  -2.9   99   99
##      ---
## 51559: 1015.0  999.0   8.5  999.0   99   99
## 51560: 1015.0  999.0   8.5  999.0   99   99
## 51561: 1015.5  999.0   8.5  999.0   99   99
## 51562: 1015.6  999.0   8.5  999.0   99   99
## 51563: 1015.8  999.0   8.5  999.0   99   99
##
## $`2022`
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2022    1    1    0    0   239   2.5   3.2  99.00 99.00 99.00  999
##      2: 2022    1    1    0    10  235   1.9   2.8  99.00 99.00 99.00  999
##      3: 2022    1    1    0    20  207   1.6   2.4  99.00 99.00 99.00  999
##      4: 2022    1    1    0    30  183   1.3   1.7  99.00 99.00 99.00  999
##      5: 2022    1    1    0    40  176   1.5   2.1   0.40   9.09  6.19  137
##      ---
## 52525: 2022    12    31    23    10  999   4.1   4.9  99.00 99.00 99.00  999
## 52526: 2022    12    31    23    20  999   3.9   4.5  99.00 99.00 99.00  999
## 52527: 2022    12    31    23    30  999   4.1   4.5  99.00 99.00 99.00  999
## 52528: 2022    12    31    23    40  999   4.1   4.5   0.43  10.00  3.36   71
## 52529: 2022    12    31    23    50  999   4.0   5.1   0.41  10.00  3.33   68
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1015.7  999   8.5  999   99   99
##      2: 1015.7  999   8.5  999   99   99
##      3: 1015.7  999   8.5  999   99   99
##      4: 1015.5  999   8.5  999   99   99
##      5: 1015.5  999   8.5  999   99   99
##      ---
## 52525: 1011.5  999   7.6  999   99   99
## 52526: 1011.4  999   7.6  999   99   99
## 52527: 1011.1  999   7.6  999   99   99
## 52528: 1011.1  999   7.6  999   99   99
## 52529: 1011.0  999   7.6  999   99   99
##
## $`2023`
##      #YY    MM    DD    hh    mm  WDIR  WSPD  GST  WVHT  DPD  APD  MWD
##      <int> <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int>
##      1: 2023    1    1    0    0   999   4.3   5.0  99.00 99.00 99.00  999
##      2: 2023    1    1    0    10  999   4.5   5.4  99.00 99.00 99.00  999
##      3: 2023    1    1    0    20  999   4.2   4.8  99.00 99.00 99.00  999
##      4: 2023    1    1    0    30  999   4.2   4.8  99.00 99.00 99.00  999
##      5: 2023    1    1    0    40  999   3.9   4.3   0.41   9.09  3.43  112
##      ---
## 52476: 2023    12    31    23    10  340   4.9   6.2   0.43  10.81  4.96   76
## 52477: 2023    12    31    23    20  332   5.0   6.0  99.00 99.00 99.00  999
## 52478: 2023    12    31    23    30  331   5.2   6.4  99.00 99.00 99.00  999
## 52479: 2023    12    31    23    40  337   5.2   6.9   0.50  10.00  3.73   99
## 52480: 2023    12    31    23    50  335   5.1   6.7  99.00 99.00 99.00  999
##      PRES  ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <num> <num>
##      1: 1010.8  999.0   7.6  999.0   99   99
##      2: 1010.6  999.0   7.6  999.0   99   99
##      3: 1010.2  999.0  999.0  999.0   99   99
##      4: 1010.0  999.0   7.6  999.0   99   99
##      5: 1009.8  999.0   7.6  999.0   99   99
##      ---
## 52476: 1014.2   3.6   7.3  -2.5   99   99
## 52477: 1014.3   3.3   7.3  -3.0   99   99
## 52478: 1014.4   3.2   7.3  -3.1   99   99
## 52479: 1014.4   3.1   7.3  -3.0   99   99
## 52480: 1014.6   3.0   7.2  -3.2   99   99
```

When null data has a specific interpretation in a dataset, it can be adjusted according to the context, rather than being directly converted to NA.

###c Use the Buoy data to see the effects of climate change:

\Tore flect the climate change trends, we can choose these variables : ATMP(Air temperature), WTMP(Sea surface temperature), then an

```
library(tidyverse)
```

```
## --- Attaching core tidyverse packages --- tidyverse 2.0.0 ---
## ✓ dplyr      1.1.4    ✓ readr      2.1.5
## ✓ forcats    1.0.0    ✓ stringr    1.5.1
## ✓ ggplot2     3.5.1    ✓ tibble     3.2.1
## ✓ lubridate  1.9.3    ✓ tidyr      1.3.1
## ✓ purrr      1.0.2
## --- Conflicts --- tidyverse_conflicts() ---
##
## X dplyr::between()      masks data.table::between()
## X dplyr::filter()      masks stats::filter()
## X dplyr::first()       masks data.table::first()
## X lubridate::hour()    masks data.table::hour()
## X lubridate::isoweek() masks data.table::isoweek()
## X dplyr::lag()         masks stats::lag()
## X dplyr::last()        masks data.table::last()
## X lubridate::mday()    masks data.table::mday()
## X lubridate::minute()  masks data.table::minute()
## X lubridate::month()   masks data.table::month()
## X lubridate::quarter() masks data.table::quarter()
## X lubridate::second()  masks data.table::second()
## X purrr::transpose()   masks data.table::transpose()
## X lubridate::wday()    masks data.table::wday()
## X lubridate::week()    masks data.table::week()
## X lubridate::yday()    masks data.table::yday()
## X lubridate::year()    masks data.table::year()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(data.table)
combined_data <- rbindlist(all_data, fill = TRUE, idcol = "year")
annual_avg <- combined_data %>%
  group_by(year) %>%
  summarize(
    avg_WTMP = mean(as.numeric(WTMP), na.rm = TRUE),
    avg_ATMP = mean(as.numeric(ATMP), na.rm = TRUE)
  )

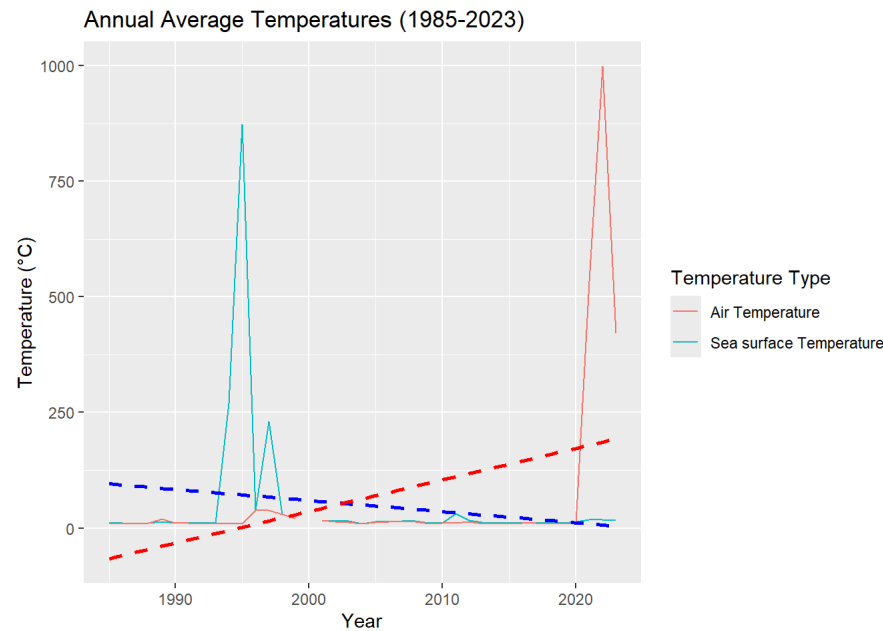
ggplot(annual_avg, aes(x = as.numeric(year))) +
  geom_line(aes(y = avg_WTMP, color = "Sea surface Temperature")) +
  geom_line(aes(y = avg_ATMP, color = "Air Temperature")) +
  geom_smooth(aes(y = avg_WTMP, method = "lm", se = FALSE, linetype = "dashed", color = "blue")) +
  geom_smooth(aes(y = avg_ATMP, method = "lm", se = FALSE, linetype = "dashed", color = "red")) +
  labs(title = "Annual Average Temperatures (1985-2023)",
       x = "Year", y = "Temperature (° C)",
       color = "Temperature Type")
```

```
## `geom_smooth()` using formula = 'y ~ x'
```

```
## Warning: Removed 1 row containing non-finite outside the scale range
## (`stat_smooth()`).
```

```
## `geom_smooth()` using formula = 'y ~ x'
```

```
## Warning: Removed 1 row containing non-finite outside the scale range
## (`stat_smooth()`).
```



The figures show that the general trend of water temperature is down, and the general trend of air temperature is up. Extreme values have occurred.

```
wtmpt_lm <- lm(avg_WTMP ~ year, data = annual_avg)
summary(wtmp_lm)
```

```
##
## Call:
## lm(formula = avg_WTMP ~ year, data = annual_avg)
##
## Residuals:
## ALL 38 residuals are 0: no residual degrees of freedom!
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  11.37766      NaN      NaN      NaN
## year1986    -0.24906      NaN      NaN      NaN
## year1987    -1.11754      NaN      NaN      NaN
## year1988    -0.82894      NaN      NaN      NaN
## year1989     2.30253      NaN      NaN      NaN
## year1990    -0.17588      NaN      NaN      NaN
## year1991    -0.51773      NaN      NaN      NaN
## year1992    -0.88803      NaN      NaN      NaN
## year1993     0.28836      NaN      NaN      NaN
## year1994   257.94989      NaN      NaN      NaN
## year1995   860.77479      NaN      NaN      NaN
## year1996    27.73944      NaN      NaN      NaN
## year1997   219.22094      NaN      NaN      NaN
## year1998    17.96955      NaN      NaN      NaN
## year1999     9.68403      NaN      NaN      NaN
## year2001     6.11812      NaN      NaN      NaN
## year2002     4.29303      NaN      NaN      NaN
## year2003     3.70302      NaN      NaN      NaN
## year2004    -1.07193      NaN      NaN      NaN
## year2005     1.87851      NaN      NaN      NaN
## year2006     2.79508      NaN      NaN      NaN
## year2007     3.62583      NaN      NaN      NaN
## year2008     4.55962      NaN      NaN      NaN
## year2009    -0.32174      NaN      NaN      NaN
## year2010     0.07863      NaN      NaN      NaN
## year2011    20.22650      NaN      NaN      NaN
## year2012     6.11483      NaN      NaN      NaN
## year2013     1.42016      NaN      NaN      NaN
## year2014    -0.53790      NaN      NaN      NaN
## year2015    -0.07921      NaN      NaN      NaN
## year2016     0.68684      NaN      NaN      NaN
## year2017     0.28844      NaN      NaN      NaN
## year2018     0.41122      NaN      NaN      NaN
## year2019     0.15203      NaN      NaN      NaN
## year2020     2.37780      NaN      NaN      NaN
## year2021     6.17047      NaN      NaN      NaN
## year2022     6.53298      NaN      NaN      NaN
## year2023     5.52595      NaN      NaN      NaN
##
## Residual standard error: NaN on 0 degrees of freedom
## (因为不存在, 1个观察量被删除了)
## Multiple R-squared:      1, Adjusted R-squared:      NaN
## F-statistic:      NaN on 37 and 0 DF, p-value: NA
```

```
atmp_lm <- lm(avg_ATMP ~ year, data = annual_avg)
summary(atmp_lm)
```

```
##
## Call:
## lm(formula = avg_ATMP ~ year, data = annual_avg)
##
## Residuals:
## ALL 38 residuals are 0: no residual degrees of freedom!
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    9.71433         NaN      NaN      NaN
## year1986       0.40256         NaN      NaN      NaN
## year1987       0.37544         NaN      NaN      NaN
## year1988       1.23765         NaN      NaN      NaN
## year1989       9.30816         NaN      NaN      NaN
## year1990       1.58459         NaN      NaN      NaN
## year1991       1.47263         NaN      NaN      NaN
## year1992      -0.41623         NaN      NaN      NaN
## year1993       0.86275         NaN      NaN      NaN
## year1994      -0.06932         NaN      NaN      NaN
## year1995      -0.35068         NaN      NaN      NaN
## year1996      28.67591         NaN      NaN      NaN
## year1997      28.75553         NaN      NaN      NaN
## year1998      19.88882         NaN      NaN      NaN
## year1999      10.84183         NaN      NaN      NaN
## year2001       7.05878         NaN      NaN      NaN
## year2002       4.91193         NaN      NaN      NaN
## year2003       3.14920         NaN      NaN      NaN
## year2004      -0.68948         NaN      NaN      NaN
## year2005       2.21969         NaN      NaN      NaN
## year2006       4.25559         NaN      NaN      NaN
## year2007       3.95737         NaN      NaN      NaN
## year2008       4.41365         NaN      NaN      NaN
## year2009      -0.21674         NaN      NaN      NaN
## year2010       0.62891         NaN      NaN      NaN
## year2011       0.85204         NaN      NaN      NaN
## year2012       4.76066         NaN      NaN      NaN
## year2013       0.47768         NaN      NaN      NaN
## year2014       0.04508         NaN      NaN      NaN
## year2015       0.53125         NaN      NaN      NaN
## year2016       1.02043         NaN      NaN      NaN
## year2017       0.61345         NaN      NaN      NaN
## year2018       0.57506         NaN      NaN      NaN
## year2019       0.27538         NaN      NaN      NaN
## year2020      -0.20631         NaN      NaN      NaN
## year2021      524.13279         NaN      NaN      NaN
## year2022     989.28567         NaN      NaN      NaN
## year2023     411.30998         NaN      NaN      NaN
##
## Residual standard error: NaN on 0 degrees of freedom
## (因为不存在, 1个观察量被删除了)
## Multiple R-squared:      1, Adjusted R-squared:      NaN
## F-statistic:      NaN on 37 and 0 DF,  p-value: NA
```

###d

```
rainfall_data<-read.csv("C:\\Users\\PC\\Desktop\\615\\Rainfall.csv", header= TRUE)
calculate_annual_rainfall <- function(rainfall_data) {
  rainfall_data <- rainfall_data %>%
    mutate(
      DATE = as.POSIXct(DATE, format = "%Y%m%d %H:%M"),
      Year = year(DATE))
  annual_rainfall <- rainfall_data %>%
    group_by(Year) %>%
    summarise(total_rainfall = sum(HPCP, na.rm = TRUE))

  return(annual_rainfall)
}
annual_rainfall <- calculate_annual_rainfall(rainfall_data)
print(annual_rainfall)
```

```
## # A tibble: 30 × 2
##   Year total_rainfall
##   <dbl>         <dbl>
## 1 1985           36.6
## 2 1986           44.3
## 3 1987           45.2
## 4 1988           34.8
## 5 1989           42.4
## 6 1990           46.5
## 7 1991           42.2
## 8 1992           43.7
## 9 1993           43.2
## 10 1994          47.6
## #   20 more rows
```

```
summary(annual_rainfall)
```

```
##      Year      total_rainfall
## Min.   :1985   Min.    : 0.50
## 1st Qu.:1992   1st Qu.:37.26
## Median :1999   Median :42.37
## Mean   :1999   Mean    :40.96
## 3rd Qu.:2006   3rd Qu.:46.18
## Max.   :2013   Max.    :53.20
## NA's   :1
```

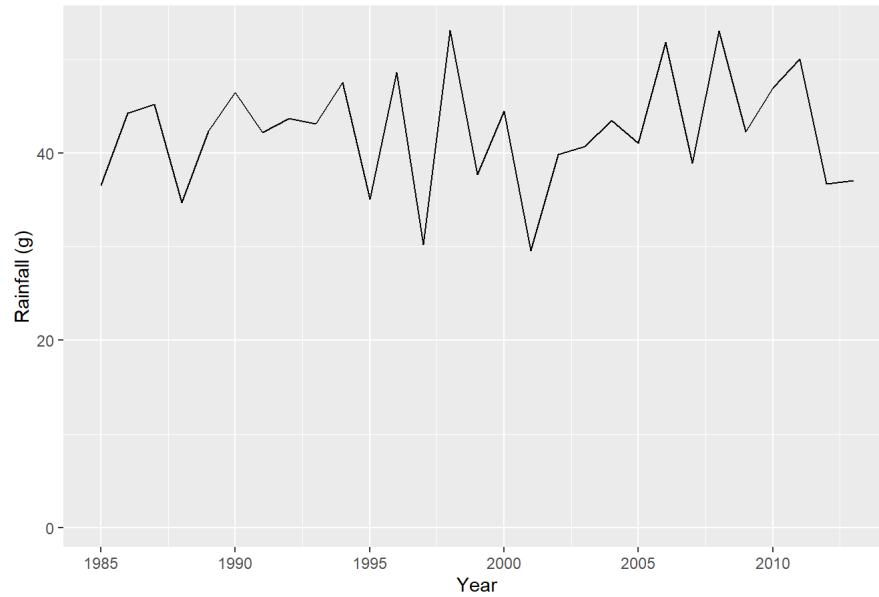
```
summary(buoy_data)
```

```
##      #YY      MM      DD      hh      mm
## Min.   :2023   Min.    : 1.000   Min.    : 1.00   Min.    : 0.0   Min.    : 0
## 1st Qu.:2023   1st Qu. : 4.000   1st Qu. : 8.00   1st Qu. : 6.0   1st Qu. :10
## Median :2023   Median : 7.000   Median :16.00   Median :11.0   Median :20
## Mean   :2023   Mean    : 6.528   Mean    :15.71   Mean    :11.5   Mean    :25
## 3rd Qu.:2023   3rd Qu. :10.000   3rd Qu. :23.00   3rd Qu. :18.0   3rd Qu. :40
## Max.   :2023   Max.    :12.000   Max.    :31.00   Max.    :23.0   Max.    :50
##      WDIR      WSPD      GST      WVHT
## Min.    : 1.0   Min.    : 0.00   Min.    : 0.00   Min.    : 0.16
## 1st Qu. :171.0   1st Qu. : 3.80   1st Qu. : 4.80   1st Qu. : 1.18
## Median :302.0   Median : 7.00   Median : 8.70   Median :99.00
## Mean   :524.6   Mean    :37.06   Mean    :37.96   Mean    :66.98
## 3rd Qu.:999.0   3rd Qu. :99.00   3rd Qu. :99.00   3rd Qu. :99.00
## Max.   :999.0   Max.    :99.00   Max.    :99.00   Max.    :99.00
##      DPD      APD      MWD      PRES
## Min.    : 2.15   Min.    : 2.54   Min.    : 0.0   Min.    : 979.2
## 1st Qu. :10.00   1st Qu. : 5.53   1st Qu. :122.0   1st Qu. :1010.3
## Median :99.00   Median :99.00   Median :999.0   Median :1015.7
## Mean   :69.43   Mean    :68.19   Mean    :713.8   Mean    :1508.4
## 3rd Qu.:99.00   3rd Qu. :99.00   3rd Qu. :999.0   3rd Qu. :1022.0
## Max.   :99.00   Max.    :99.00   Max.    :999.0   Max.    :9999.0
##      ATMP      WTMP      DEWP      VIS      TIDE
## Min.    : -4.3   Min.    : 4.4   Min.    : -12.9   Min.    :99   Min.    :99
## 1st Qu. : 15.3   1st Qu. : 6.7   1st Qu. : 12.2   1st Qu. :99   1st Qu. :99
## Median : 20.4   Median : 12.0   Median : 19.3   Median :99   Median :99
## Mean   :421.0   Mean    : 16.9   Mean    :419.3   Mean    :99   Mean    :99
## 3rd Qu.:999.0   3rd Qu. :17.3   3rd Qu. :999.0   3rd Qu. :99   3rd Qu. :99
## Max.   :999.0   Max.    :999.0   Max.    :999.0   Max.    :99   Max.    :99
```

```
ggplot(annual_rainfall, aes(x = Year, y = total_rainfall)) +
  geom_line() +
  labs(title = "Rainfall in Boston (1985-2013)", x = "Year", y = "Rainfall (g)")
```

```
## Warning: Removed 1 row containing missing values or values outside the scale range
## (`geom_line()`).
```

Rainfall in Boston (1985-2013)



```
buoy_data %>%  
  summarise(WTMP_avg = mean(WTMP, na.rm = TRUE),  
            ATMP_avg = mean(ATMP, na.rm = TRUE))
```

```
##   WTMP_avg ATMP_avg  
## 1  16.90361 421.0243
```