

HW4

```
#a
library(data.table)
data <- function(year) {
  file_root <- "https://www.ndbc.noaa.gov/view_text_file.php?filename=44013h"
  tail <- ".txt.gz&dir=data/historical/stdmet/"
  path <- paste0(file_root, year, tail)

  try({
    header <- scan(path, what = 'character', nlines = 1, quiet = TRUE)
    buoy <- fread(path, header = FALSE, skip = 2)
    colnames(buoy) <- header
    return(buoy)
  }, silent = TRUE)

  cat("Error reading data for the year", year, "\n")
  return(NULL)
}

all_data <- list()

for (year in 1985:2023) {
  cat("Reading data for the year", year, "...\\n")
  year_data <- data(year)

  if (!is.null(year_data)) {
    if (year < 2000) {
      year_data[, TIDE:= NA]
    }

    all_data[[as.character(year)]] <- year_data
  }
}

## Reading data for the year 1985 ...
## Reading data for the year 1986 ...
## Reading data for the year 1987 ...
## Reading data for the year 1988 ...
## Reading data for the year 1989 ...
## Reading data for the year 1990 ...
## Reading data for the year 1991 ...
## Reading data for the year 1992 ...
## Reading data for the year 1993 ...
## Reading data for the year 1994 ...
## Reading data for the year 1995 ...
## Reading data for the year 1996 ...
## Reading data for the year 1997 ...
```

```

## Reading data for the year 1998 ...
## Reading data for the year 1999 ...
## Reading data for the year 2000 ...

## Warning in fread(path, header = FALSE, skip = 2): Stopped early on line 5114.
## Expected 16 fields but found 17. Consider fill=TRUE and comment.char=. 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>>

## Error reading data for the year 2000
## Reading data for the year 2001 ...
## Reading data for the year 2002 ...
## Reading data for the year 2003 ...
## Reading data for the year 2004 ...
## Reading data for the year 2005 ...
## Reading data for the year 2006 ...
## Reading data for the year 2007 ...
## Reading data for the year 2008 ...
## Reading data for the year 2009 ...
## Reading data for the year 2010 ...
## Reading data for the year 2011 ...
## Reading data for the year 2012 ...
## Reading data for the year 2013 ...
## Reading data for the year 2014 ...
## Reading data for the year 2015 ...
## Reading data for the year 2016 ...
## Reading data for the year 2017 ...
## Reading data for the year 2018 ...
## Reading data for the year 2019 ...
## Reading data for the year 2020 ...
## Reading data for the year 2021 ...
## Reading data for the year 2022 ...
## Reading data for the year 2023 ...

print(all_data)

```

```

## $'1985'
##      YY   MM   DD   hh   WD   WSPD   GST   WVHT   DPD   APP   MWD   BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <int> <num>
##  1:   85    1    1    1    80     4     5    99    99    99    999 1030.0
##  2:   85    1    1    2   100     4     5    99    99    99    999 1030.1
##  3:   85    1    1    3   100     4     5    99    99    99    999 1029.4
##  4:   85    1    1    4   110     4     5    99    99    99    999 1028.6
##  5:   85    1    1    5    90     4     5    99    99    99    999 1027.8
##  ---
## 8714:   85   12   31   19   200    10    13    99    99    99    999 1008.5
## 8715:   85   12   31   20   200    11    15    99    99    99    999 1008.0
## 8716:   85   12   31   21   200    10    12    99    99    99    999 1008.7
## 8717:   85   12   31   22   210     9    12    99    99    99    999 1009.0
## 8718:   85   12   31   23   210     8    10    99    99    99    999 1009.1
##      ATMP  WTMP  DEWP   VIS   TIDE
##      <num> <num> <num> <num> <lgcl>
##  1:   5.1   6.7   999     99     NA

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##   2:  5.6  6.6  999   99    NA
##   3:  5.8  6.7  999   99    NA
##   4:  5.8  6.7  999   99    NA
##   5:  5.3  6.7  999   99    NA
##   ---
## 8714:  7.5  4.6  999   99    NA
## 8715:  7.9  4.7  999   99    NA
## 8716:  7.4  4.8  999   99    NA
## 8717:  7.2  4.9  999   99    NA
## 8718:  6.7  4.4  999   99    NA
##
## $'1986'
##      YY   MM   DD   hh   WD   WSPD   GST   WVHT   DPD   APD   MWD   BAR
##      <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <int> <num>
##   1:   86     1     1     1   210     9    10  99.0  99.0  99.0  999 1009.3
##   2:   86     1     1     2   220     8    10  99.0  99.0  99.0  999 1009.2
##   3:   86     1     1     3   220     6     8  99.0  99.0  99.0  999 1009.3
##   4:   86     1     1     4   210     6     8  99.0  99.0  99.0  999 1009.0
##   5:   86     1     1     5   210     6     8  99.0  99.0  99.0  999 1008.4
##   ---
## 8163:   86    12    31    19   320     8    10   3.0  11.1   8.3  999 1017.5
## 8164:   86    12    31    20   350     8     9   2.9  11.1   8.2  999 1018.8
## 8165:   86    12    31    21   320     9    11   2.7  11.1   8.4  999 1019.6
## 8166:   86    12    31    22   320     8    10   2.7  11.1   8.6  999 1021.0
## 8167:   86    12    31    23   290     7     8   2.9  11.1   8.7  999 1022.5
##      ATMP  WTMP  DEWP   VIS   TIDE
##      <num> <num> <num> <num> <lgcl>
##   1:   4.7   4.3  999   99    NA
##   2:   4.0   4.3  999   99    NA
##   3:   3.9   4.3  999   99    NA
##   4:   3.9   4.3  999   99    NA
##   5:   3.9   4.3  999   99    NA
##   ---
## 8163:   4.0   6.2  999   99    NA
## 8164:   4.3   6.2  999   99    NA
## 8165:   4.4   5.9  999   99    NA
## 8166:   3.9   5.9  999   99    NA
## 8167:   3.2   5.9  999   99    NA
##
## $'1987'
##      YY   MM   DD   hh   WD   WSPD   GST   WVHT   DPD   APD   MWD   BAR
##      <int> <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <int> <num>
##   1:   87     1     1     1   290    7.0   8.0   2.4  10.0   8.0  999 1024.3
##   2:   87     1     1     2   290    6.0   8.0   2.5  11.1   8.3  999 1023.8
##   3:   87     1     1     3   300    6.0   7.0   2.6  11.1   8.6  999 1024.1
##   4:   87     1     1     4   290    5.0   6.0   2.7  12.5   8.7  999 1025.2
##   5:   87     1     1     5   340    6.0   7.0   2.4  14.3   8.4  999 1025.0
##   ---
## 7597:   87    12    31    19   177    8.6  10.1   0.4  11.1   4.7  999 1023.4
## 7598:   87    12    31    20   195    7.9  9.3   0.5  11.1   4.3  999 1023.6
## 7599:   87    12    31    21   193    7.6  9.0   0.4  10.0   4.1  999 1022.3
## 7600:   87    12    31    22   223    6.7  8.0   0.4  10.0   4.1  999 1022.1
## 7601:   87    12    31    23   225    5.0  6.0   0.3  12.5   4.4  999 1021.3
##      ATMP  WTMP  DEWP   VIS   TIDE

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##      <num> <num> <num> <num> <lgcl>
## 1:   2.0   5.9   999    99     NA
## 2:   1.6   5.9   999    99     NA
## 3:   1.3   6.0   999    99     NA
## 4:   1.0   5.9   999    99     NA
## 5:   0.7   5.9   999    99     NA
## ---
## 7597: 0.5   5.1   999    99     NA
## 7598: 0.1   5.1   999    99     NA
## 7599: 0.9   5.1   999    99     NA
## 7600: 1.6   5.1   999    99     NA
## 7601: 1.6   5.1   999    99     NA
##
## $'1988'
##      YY MM DD hh WD WSPD GST WVHT DPD APD MWD BAR
##      <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <num>
## 1: 88   1   1   2 182   8.0   9.3   0.4   3.6   3.8   999 1018.9
## 2: 88   1   1   3 196   8.1  10.3   0.4   3.0   3.5   999 1019.0
## 3: 88   1   1   4 193   7.8   8.7   0.4   2.9   3.4   999 1019.0
## 4: 88   1   1   5 182   6.9   8.9   0.3   2.6   3.7   999 1018.9
## 5: 88   1   1   6 183   7.2   8.2   0.3  12.5   4.0   999 1018.2
## ---
## 8066: 88   12  31  19 259   8.8  11.5   0.4   3.3   3.4   999 1013.9
## 8067: 88   12  31  20 267   8.5  10.2   0.5   3.6   3.5   999 1014.7
## 8068: 88   12  31  21 277   9.7  12.2   0.6   3.4   3.5   999 1015.5
## 8069: 88   12  31  22 291   9.6  12.6   0.4   3.6   3.5   999 1016.4
## 8070: 88   12  31  23 284   7.1   8.8   0.3   3.1   3.3   999 1017.9
##      ATMP WTMP DEWP VIS TIDE
##      <num> <num> <num> <num> <lgcl>
## 1: 4.6   5.1   999    99     NA
## 2: 4.7   5.1   999    99     NA
## 3: 4.4   5.1   999    99     NA
## 4: 4.3   5.1   999    99     NA
## 5: 4.3   5.1   999    99     NA
## ---
## 8066: 4.4   4.7   999    99     NA
## 8067: 4.7   4.7   999    99     NA
## 8068: 4.3   4.7   999    99     NA
## 8069: 3.6   4.7   999    99     NA
## 8070: 3.3   4.7   999    99     NA
##
## $'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   1 329   9.0  11.2   0.3   2.9   3.2   999 1020.1
## 2: 89   1   1   2 326   7.4   9.9   0.3   3.1   3.4   999 1022.3
## 3: 89   1   1   3 340   8.2  11.4   0.2   3.0   3.5   999 1022.5
## 4: 89   1   1   4 349   9.6  11.4   0.3   3.2   3.4   999 1022.5
## 5: 89   1   1   5 345   9.0  10.6   0.4   3.3   3.5   999 1023.6
## ---
## 7928: 89   12  31  19 158   7.1   8.2   1.0   6.2   5.3   999 1013.9
## 7929: 89   12  31  20 163   7.0   8.2   1.1   7.1   5.4   999 1012.7
## 7930: 89   12  31  21 160   7.3   8.2   1.0   6.7   5.5   999 1011.4
## 7931: 89   12  31  22 150   7.3   8.1   1.0   7.1   5.6   999 1009.6

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## 7932:   89    12    31    23   159    7.5   8.4   1.0   7.1   5.6   999 1008.0
##      ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <lgcl>
## 1:   1.7   4.7   999    99    NA
## 2:   1.1   4.7   999    99    NA
## 3:   0.2   4.7   999    99    NA
## 4:  -0.7   4.7   999    99    NA
## 5:  -1.6   4.7   999    99    NA
## ---
## 7928:   3.4   2.9   999    99    NA
## 7929:   3.2   2.9   999    99    NA
## 7930:   3.7   2.9   999    99    NA
## 7931:   4.4   3.2   999    99    NA
## 7932:   3.9   3.2   999    99    NA
##
## $'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    1   149    9.9   11.6    1.2    7.1    5.5   999 1003.1
## 2:   90    1    1    2   182    7.8    9.7    1.1    7.1    5.4   999 1001.8
## 3:   90    1    1    3   200    9.5   10.9    1.0    7.1    5.4   999 1000.5
## 4:   90    1    1    4   199    9.9   11.8    1.1    7.1    5.5   999  999.6
## 5:   90    1    1    5   202   10.0   11.5    1.0    7.1    5.7   999  998.2
## ---
## 8698:   90   12    31    19   337    9.6   12.4    0.7   10.0    4.4   999 1023.4
## 8699:   90   12    31    20   322   10.3   12.8    0.8    6.2    4.7   999 1024.9
## 8700:   90   12    31    21   325    8.4   10.9    0.7   11.1    4.9   999 1026.1
## 8701:   90   12    31    22   327    9.7   12.4    0.7    6.2    4.9   999 1027.2
## 8702:   90   12    31    23   326    9.0   12.0    0.7    7.1    5.2   999 1028.6
##      ATMP   WTMP   DEWP   VIS   TIDE
##      <num> <num> <num> <num> <lgcl>
## 1:   5.4   3.3   999    99    NA
## 2:   7.0   3.2   999    99    NA
## 3:   8.8   3.2   999    99    NA
## 4:   8.6   3.2   999    99    NA
## 5:   8.3   3.1   999    99    NA
## ---
## 8698:   0.0   6.4   999    99    NA
## 8699:  -0.5   6.4   999    99    NA
## 8700:  -1.0   6.4   999    99    NA
## 8701:  -2.1   6.4   999    99    NA
## 8702:  -2.6   6.4   999    99    NA
##
## $'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    1   343    8.7   10.9    0.8    5.9    5.1   999 1031.1
## 2:   91    1    1    2   336    7.3   10.7    0.7    7.1    5.0   999 1031.7
## 3:   91    1    1    3   328    9.1   11.2    0.7    7.1    5.2   999 1031.8
## 4:   91    1    1    4   334   10.6   12.3    0.8    6.7    4.7   999 1032.6
## 5:   91    1    1    5   331    9.4   12.0    0.7    6.7    5.0   999 1032.9
## ---
## 8725:   91   12    31    19   285    3.4    5.0    2.0   10.0    7.8   999 1035.0
## 8726:   91   12    31    20   266    3.8    4.8    1.9   10.0    7.9   999 1034.8

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## 8727:   91   12   31   21   269   4.4   5.5   1.7   10.0   7.6   999 1034.5
## 8728:   91   12   31   22   263   4.1   5.4   1.9   9.1   7.9   999 1034.4
## 8729:   91   12   31   23   254   4.5   5.7   1.6   8.3   7.6   999 1034.5
##          ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <lgcl>
## 1: -3.4   6.4  999   99    NA
## 2: -4.1   6.4  999   99    NA
## 3: -4.3   6.4  999   99    NA
## 4: -4.4   6.4  999   99    NA
## 5: -4.9   6.4  999   99    NA
## ---
## 8725:   0.8   5.5  999   99    NA
## 8726:   1.6   5.5  999   99    NA
## 8727:   2.0   5.5  999   99    NA
## 8728:   2.1   5.6  999   99    NA
## 8729:   2.3   5.6  999   99    NA
##
## $'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   2   260   5.6   6.3   1.1   7.7   7.5   999 1034.3
## 2:  92   1   1   3   269   5.0   5.9   1.1  11.1   7.6   999 1034.2
## 3:  92   1   1   4   281   5.2   6.4   1.0  10.0   8.1   999 1034.1
## 4:  92   1   1   5   280   5.4   6.4   1.0  10.0   8.1   999 1033.5
## 5:  92   1   1   6   271   5.6   6.3   1.0  10.0   8.3   999 1033.4
## ---
## 8731:  92   12  31   19   264   3.6   4.3   1.3   8.3   7.5   999 1007.0
## 8732:  92   12  31   20   248   2.5   3.1   1.3  10.0   7.7   999 1006.3
## 8733:  92   12  31   21   229   6.7   7.4   1.1  10.0   7.2   999 1005.5
## 8734:  92   12  31   22   236   8.8   9.8   1.0  10.0   7.4   999 1004.8
## 8735:  92   12  31   23   252   5.6   6.8   1.0  10.0   7.5   999 1005.6
##          ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <lgcl>
## 1:  1.7   5.6  999   99    NA
## 2:  1.7   5.6  999   99    NA
## 3:  1.7   5.6  999   99    NA
## 4:  1.6   5.6  999   99    NA
## 5:  1.3   5.5  999   99    NA
## ---
## 8731:  3.2   4.7  999   99    NA
## 8732:  3.9   4.7  999   99    NA
## 8733:  5.5   4.7  999   99    NA
## 8734:  6.4   4.7  999   99    NA
## 8735:  6.3   4.7  999   99    NA
##
## $'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   1   245   7.3   8.2   0.8  10.0   7.7   999 1006.3
## 2:  93   1   1   2   243   8.1   8.9   0.8  10.0   8.0   999 1006.5
## 3:  93   1   1   3   261   7.7   8.8   0.7  9.1   7.9   999 1006.5
## 4:  93   1   1   4   269   7.8   8.6   0.8  9.1   7.8   999 1007.0
## 5:  93   1   1   5   270   5.0   5.6   0.8  9.1   7.8   999 1007.1
## ---

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## 8688:  93  12  31  19  228  9.7 12.1  0.8  3.4  3.4  217 1018.0
## 8689:  93  12  31  20  233 10.1 12.9  0.8  3.3  3.4  219 1018.6
## 8690:  93  12  31  21  255 10.8 14.4  0.9  3.4  3.4  241 1019.7
## 8691:  93  12  31  22  252  9.8 12.6  0.9  3.7  3.5  256 1020.7
## 8692:  93  12  31  23  260  9.4 13.3  0.8  3.4  3.4  267 1021.7
##          ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <lgcl>
## 1:   7.1   4.7 999 99.0    NA
## 2:   7.4   4.4 999 99.0    NA
## 3:   7.8   4.4 999 99.0    NA
## 4:   7.9   4.4 999 99.0    NA
## 5:   7.1   4.4 999 99.0    NA
## ---
## 8688: -1.2   5.6 999 21.7    NA
## 8689: -0.8   5.6 999 21.9    NA
## 8690: -0.6   5.6 999 24.1    NA
## 8691: -0.8   5.6 999 25.6    NA
## 8692: -1.1   5.5 999 26.7    NA
##
## $'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    1  252 10.3 13.3  0.7  3.4  3.4  269 1022.7
## 2:   94    1    1    2  259 11.7 14.7  0.7  3.4  3.4  270 1023.4
## 3:   94    1    1    3  261 11.8 14.3  0.9  4.0  3.7  265 1023.7
## 4:   94    1    1    4  262 10.4 12.6  0.9  4.0  3.5  271 1024.1
## 5:   94    1    1    5  259 10.0 12.1  0.8  4.0  3.5  273 1024.3
## ---
## 8682:   94   12   31   19   160   5.7   6.7   0.4  10.0   5.7    74 1026.6
## 8683:   94   12   31   20   183   5.0   6.3   0.4   8.3   4.5    72 1026.5
## 8684:   94   12   31   21   191   7.2   9.1   0.4  10.0   4.2    48 1025.8
## 8685:   94   12   31   22   192   5.9   6.8   0.4   2.5   3.6   163 1025.7
## 8686:   94   12   31   23   186   7.7   9.9   0.5   2.9   3.3   171 1025.2
##          ATMP  WTMP  DEWP  VIS  TIDE
##      <num> <num> <num> <num> <lgcl>
## 1:  -1.5   5.5 999 26.9    NA
## 2:  -1.4   5.5 999 27.0    NA
## 3:  -1.6   5.5 999 26.5    NA
## 4:  -1.4   5.5 999 27.1    NA
## 5:  -0.8   5.5 999 27.3    NA
## ---
## 8682:  2.8 999.0 999   7.4    NA
## 8683:  4.3 999.0 999   7.2    NA
## 8684:  4.7 999.0 999   4.8    NA
## 8685:  4.0 999.0 999  16.3    NA
## 8686:  3.6 999.0 999  17.1    NA
##
## $'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    1  206   8.8 11.6   0.6   3.0   3.3  217 1023.8
## 2:   95    1    1    2  204   9.9 12.0   0.7   3.1   3.3  226 1022.5
## 3:   95    1    1    3  205  11.5 14.2   0.8   3.3   3.3  217 1021.5
## 4:   95    1    1    4  215  10.5 13.2   0.9   3.7   3.6  229 1021.4

```

```

##   5:    95    1    1    5   222    8.4    9.8    0.8    3.7    3.4   242 1021.1
##   ---
## 8655:    95    12   31    19   245    4.3    5.3    0.2   12.5    5.8    74 1014.2
## 8656:    95    12   31    20   245    4.6    5.6    0.2   12.5    4.5    72 1014.3
## 8657:    95    12   31    21   231    3.3    4.2    0.2   14.3    4.8    77 1013.5
## 8658:    95    12   31    22   232    3.2    3.7    0.2   12.5    6.1    82 1014.3
## 8659:    95    12   31    23   226    3.3    4.1    0.2   14.3    6.4    77 1014.2
##      ATMP   WTMP  DEWP   VIS   TIDE
##      <num> <num> <num> <num> <lgcl>
##  1:    3.5 999.0  999  21.7    NA
##  2:    4.1 999.0  999  22.6    NA
##  3:    5.1 999.0  999  21.7    NA
##  4:    4.8 999.0  999  22.9    NA
##  5:    3.9 999.0  999  24.2    NA
##   ---
## 8655:    3.0    5.5  999    7.4    NA
## 8656:    3.2    5.5  999    7.2    NA
## 8657:    3.2    5.5  999    7.7    NA
## 8658:    3.6    5.5  999    8.2    NA
## 8659:    3.6    5.5  999    7.7    NA
##
## $'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     1   225    2.8    3.2    0.17  12.50   7.35    82 1014.0
##  2:    96     1     1     2   234    1.9    2.3    0.18  12.50   7.21    74 1013.5
##  3:    96     1     1     3   233    2.8    3.8    0.17  12.50   6.93    77 1013.3
##  4:    96     1     1     4   263    3.2    3.8    0.15  12.50   7.36    89 1013.4
##  5:    96     1     1     5   274    3.2    3.8    0.16  12.50   7.69    85 1013.3
##   ---
## 8947:    96    12   31    19   337    7.6    9.8    0.86   4.55   3.85    49 1021.2
## 8948:    96    12   31    20   334    8.0   10.7    1.00   5.26   3.83    49 1021.1
## 8949:    96    12   31    21   326    8.6   10.5    1.23   5.00   4.09    48 1021.9
## 8950:    96    12   31    22   323   11.0   13.6    1.31   5.88   4.19    47 1023.1
## 8951:    96    12   31    23   332    9.4   12.2    1.32   5.26   4.13    47 1024.1
##      ATMP   WTMP  DEWP   VIS   TIDE
##      <num> <num> <num> <num> <lgcl>
##  1:    3.5    5.5  999    99    NA
##  2:    3.2    5.5  999    99    NA
##  3:    3.5    5.5  999    99    NA
##  4:    3.2    5.5  999    99    NA
##  5:    3.3    5.5  999    99    NA
##   ---
## 8947:   -7.0    6.3  999    99    NA
## 8948:   -7.1    6.3  999    99    NA
## 8949:   -7.2    6.3  999    99    NA
## 8950:   -7.6    6.3  999    99    NA
## 8951:   -8.0    6.3  999    99    NA
##
## $'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     1   312   10.8   13.8    1.41   5.26   4.14    40 1026.2
##  2:    97     1     1     2   323   11.4   14.0    1.43   4.55   4.25   355 1026.8

```

```

##   3:   97    1    1    3   336  11.4  14.2  1.57  5.56  4.40    42 1027.3
##   4:   97    1    1    4   333  10.9  14.0  1.83  6.67  4.76    45 1027.6
##   5:   97    1    1    5   332  10.5  14.0  1.81  6.67  4.79    32 1027.7
##   ---
## 5707:   97    12   31    19   274  10.4  13.5  1.06  3.85  4.07    999 1004.0
## 5708:   97    12   31    20   290   9.7  12.5  1.02  12.50  4.03    999 1005.6
## 5709:   97    12   31    21   289  10.1  12.0  1.04  11.11  4.27    999 1007.7
## 5710:   97    12   31    22   305  10.4  13.4  0.91  12.50  3.93    999 1009.7
## 5711:   97    12   31    23   304  13.6  16.9  1.28  4.00  3.96    999 1011.5
##          ATMP  WTMP  DEWP  VIS  TIDE
##          <num> <num> <num> <num> <lgcl>
##   1: -9.1   6.3  999   99    NA
##   2: -9.2   6.3  999   99    NA
##   3: -9.7   6.3  999   99    NA
##   4: -10.6   6.3  999   99    NA
##   5: -10.8   6.3  999   99    NA
##   ---
## 5707: -1.5   5.9  999   99    NA
## 5708: -1.8   5.6  999   99    NA
## 5709: -3.1   5.5  999   99    NA
## 5710: -3.7   5.2  999   99    NA
## 5711: -4.8   5.1  999   99    NA
##
## $'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    1   287  10.6  13.9  1.29  4.35  4.11  999 1015.4
##   2:  98    1    1    2   286  11.7  15.5  1.12  4.00  4.00  999 1016.3
##   3:  98    1    1    3   286  11.9  15.0  1.04  4.00  3.94  999 1017.1
##   4:  98    1    1    4   295  12.2  14.7  1.26  4.17  4.02  999 1017.9
##   5:  98    1    1    5   297  13.1  16.2  1.25  4.35  4.07  999 1018.8
##   ---
## 8779:  98    12   31    19   242   6.9   9.1  0.56  11.11  3.56  999 1017.8
## 8780:  98    12   31    20   242   6.6   8.6  0.53  2.86  3.58  999 1017.7
## 8781:  98    12   31    21   229   6.2   8.5  0.43  2.94  3.48  999 1017.9
## 8782:  98    12   31    22   207   5.6   7.7  0.39  10.00  4.25  999 1017.7
## 8783:  98    12   31    23   213   5.2   7.5  0.35  11.11  4.81  999 1017.4
##          ATMP  WTMP  DEWP  VIS  TIDE
##          <num> <num> <num> <num> <lgcl>
##   1: -6.5   5.1  999   99    NA
##   2: -7.0   5.2  999   99    NA
##   3: -7.6   5.6  999   99    NA
##   4: -8.1   5.6  999   99    NA
##   5: -8.8   5.6  999   99    NA
##   ---
## 8779: -5.5   5.9  999   99    NA
## 8780: -5.1   5.8  999   99    NA
## 8781: -4.6   5.6  999   99    NA
## 8782: -4.4   5.8  999   99    NA
## 8783: -4.5   5.6  999   99    NA
##
## $'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    1  218  5.6  7.3  0.31 11.11  5.51  999 1016.5
##   2: 1999    1    1    2  226  5.7  7.0  0.32 12.50  6.53  999 1015.8
##   3: 1999    1    1    3  228  5.7  7.3  0.31 11.11  6.17  999 1015.3
##   4: 1999    1    1    4  237  5.9  7.7  0.39 11.11  5.02  999 1015.0
##   5: 1999    1    1    5  235  5.7  7.5  0.42 11.11  4.81  999 1014.9
##   ---
## 8343: 1999    12   31    19  340  4.9  6.5  0.65  9.09  3.92  999 1017.2
## 8344: 1999    12   31    20  350  4.5  5.9  0.58  4.17  4.04  999 1017.4
## 8345: 1999    12   31    21  346  3.2  4.6  0.58 11.11  4.24  999 1018.0
## 8346: 1999    12   31    22  360  3.3  4.1  0.51 10.00  4.21  999 1018.1
## 8347: 1999    12   31    23    5  1.2  2.3  0.51 10.00  4.40  999 1018.7
##          ATMP  WTMP  DEWP  VIS  TIDE
##          <num> <num> <num> <num> <lgcl>
##   1: -4.0   5.7 999.0   99    NA
##   2: -3.9   5.7 999.0   99    NA
##   3: -3.9   5.7 999.0   99    NA
##   4: -3.8   5.6 999.0   99    NA
##   5: -3.9   5.6 999.0   99    NA
##   ---
## 8343:  0.1   5.9 -8.0   99    NA
## 8344:  0.5   5.9 -8.2   99    NA
## 8345:  0.8   5.9 -5.5   99    NA
## 8346:  0.9   5.9 -4.3   99    NA
## 8347:  1.2   5.9 -3.5   99    NA
##
## $'2001'
##          YYYY  MM  DD  hh  WD  WSPD  GST  WVHT  DPD  APP  MWD  BAR
##          <int> <int> <int> <int> <num> <num> <num> <num> <num> <int> <int>
##   1: 2001     1    1    1  255 14.3 17.5  1.50  4.35  4.17  999 1002.0
##   2: 2001     1    1    2  263 15.8 19.9  1.68  4.76  4.31  999 1002.4
##   3: 2001     1    1    3  267 14.4 17.5  1.64  5.00  4.37  999 1003.6
##   4: 2001     1    1    4  270 13.9 17.6  1.55  4.76  4.21  999 1004.6
##   5: 2001     1    1    5  268 12.9 15.6  1.47  4.76  4.16  999 1005.5
##   ---
## 8755: 2001    12   31    19  248  9.3 11.1  0.67  3.45  3.21  999 1009.9
## 8756: 2001    12   31    20  242  8.9 10.7  0.69  3.23  3.15  999 1010.3
## 8757: 2001    12   31    21  240 10.5 99.0 99.00 99.00 99.00 999 9999.0
## 8758: 2001    12   31    22  244  8.6 99.0 99.00 99.00 99.00 999 9999.0
## 8759: 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: -1.9   4.3 -7.1   99   99
##   2: -1.9   4.3 -7.3   99   99
##   3: -2.1   4.3 -7.2   99   99
##   4: -2.2   4.4 -8.3   99   99
##   5: -2.3   4.4 -7.8   99   99
##   ---
## 8755: -0.3   7.0 -8.7   99   99
## 8756:  0.1   7.0 -8.9   99   99
## 8757: 999.0 999.0 999.0   99   99
## 8758: 999.0 999.0 999.0   99   99
## 8759:  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    1  234    9.5   11.5   0.66   3.13   3.09   999 1013.4
##  2: 2002    1    1    2  232    9.7   12.4   0.73   3.57   3.26   999 1013.9
##  3: 2002    1    1    3  255   10.5   12.5   0.80   3.70   3.37   999 1013.5
##  4: 2002    1    1    4  261   10.1   12.4   0.79   3.70   3.45   999 1013.4
##  5: 2002    1    1    5  258   10.1   12.4   0.85   3.57   3.38   999 1013.4
##  ---
## 8755: 2002   12   31    19   183    4.5    5.8   0.96   5.56   4.16   999 1015.0
## 8756: 2002   12   31    20   313    2.0    2.4   0.93   4.55   4.31   999 1014.6
## 8757: 2002   12   31    21   316    2.0    2.5   0.98   6.25   4.62   999 1014.7
## 8758: 2002   12   31    22   330    2.6    3.2   0.99   6.67   4.98   999 1014.3
## 8759: 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>
##  1:   0.0   6.7  -8.3   99   99
##  2:  -0.5   6.7  -8.1   99   99
##  3:  -0.4   6.7  -8.1   99   99
##  4:  -0.4   6.7  -8.5   99   99
##  5:  -0.5   6.7  -7.1   99   99
##  ---
## 8755:   5.1   6.0   4.8   99   99
## 8756:   4.4   6.0   4.2   99   99
## 8757:   4.8   6.0   4.6   99   99
## 8758:   4.7   6.0   4.6   99   99
## 8759:   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    1   183    3.4    3.8   0.93   6.67   4.92   999 1012.6
##  2: 2003    1    1    2   180    4.2    5.0   0.89   6.25   4.91   999 1011.8
##  3: 2003    1    1    3   207    6.4    7.4   0.80   6.67   4.89   999 1011.1
##  4: 2003    1    1    4   204    7.3    8.2   0.70   6.67   4.73   999 1010.3
##  5: 2003    1    1    5   211    5.0    6.3   0.69   6.67   4.08   999 1009.6
##  ---
## 8754: 2003   12   31    19   276    5.4    6.5   0.48   3.23   3.09   999 1019.0
## 8755: 2003   12   31    20   237    3.7    4.3   0.28   2.86   3.03   999 1018.9
## 8756: 2003   12   31    21   208    3.0    3.6   0.18   2.50   3.24   999 1018.1
## 8757: 2003   12   31    22   185    4.3    5.2   0.00   0.00   0.00   999 1017.4
## 8758: 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>
##  1:   4.7   6.0   4.6   99   99
##  2:   5.0   6.0   4.9   99   99
##  3:   5.9   6.0   5.8   99   99
##  4:   6.0   6.0   5.3   99   99
##  5:   6.6   6.0   5.3   99   99
##  ---
## 8754:   5.5   5.2  -1.4   99   99
## 8755:   5.7   5.2   0.0   99   99
## 8756:   5.6   5.2   0.7   99   99
## 8757:   5.9   5.2   0.0   99   99
## 8758:   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    1    214   9.7  11.7  0.43  2.78  2.89  999 1014.2
## 2: 2004    1    1    2    227   9.9  12.2  99.00 99.00 99.00 999 1013.8
## 3: 2004    1    1    3    232  11.8  14.5  0.96  3.45  3.34  999 1013.0
## 4: 2004    1    1    4    232   9.2  11.3  1.00  3.57  3.43  999 1013.2
## 5: 2004    1    1    5    227  10.7  12.5  0.83  3.45  3.30  999 1012.5
## ---
## 8756: 2004    12   31    19   153   7.5   8.8  0.96  4.35  3.85  999 1025.9
## 8757: 2004    12   31    20   165   6.2   7.4  0.96  4.76  3.92  999 1025.6
## 8758: 2004    12   31    21   172   6.4   7.2  0.96  4.35  4.00  999 1025.0
## 8759: 2004    12   31    22   175   8.1   9.9  0.87  4.76  3.91  999 1023.8
## 8760: 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: 5.1   5.2   0.0   99   99
## 2: 4.8   5.2  -0.8   99   99
## 3: 5.1   5.2  -0.2   99   99
## 4: 5.2   5.2  -0.7   99   99
## 5: 5.4   5.2  -0.1   99   99
## ---
## 8756: 6.3   6.3   4.9   99   99
## 8757: 6.6   6.3   5.4   99   99
## 8758: 7.4   6.3   5.9   99   99
## 8759: 7.4   6.3   6.3   99   99
## 8760: 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    1     0   193   8.3  10.5  0.78  3.85  3.57  999
## 2: 2005    1    1    2     0   212   7.0   8.9  0.90  3.13  3.50  999
## 3: 2005    1    1    3     0   210   8.8  11.2  1.00  4.17  3.70  999
## 4: 2005    1    1    4     0   237   6.8   8.0  1.00  3.33  3.79  999
## 5: 2005    1    1    5     0   210   5.7   6.7  0.84  3.57  3.82  999
## ---
## 8703: 2005    12   31    19     0   56   4.3   5.7  0.98 11.11  5.64  999
## 8704: 2005    12   31    20     0   56   3.4   4.5  1.06 10.00  5.49  999
## 8705: 2005    12   31    21     0   52   2.9   4.7  1.07 11.11  5.65  999
## 8706: 2005    12   31    22     0   59   5.1   6.7  1.03 11.11  5.49  999
## 8707: 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: 1022.1  8.3   6.3   6.1   99   99
## 2: 1022.0  8.2   6.3   5.2   99   99
## 3: 1021.1  8.7   6.3   5.1   99   99
## 4: 1021.4  7.9   6.3   5.0   99   99
## 5: 1020.5  7.4   6.3   5.0   99   99
## ---
## 8703: 1011.0  0.4   5.8 999.0   99   99
## 8704: 1011.1  0.4   5.9 999.0   99   99
## 8705: 1011.6  0.8   5.9  -4.1   99   99

```

```

## 8706: 1011.1   1.1   5.9  -2.7    99    99
## 8707: 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> <num> <num> <num> <num> <num> <int>
## 1: 2006    1    1    1    0    83   4.9   6.0   0.89  10.00  5.09  999
## 2: 2006    1    1    2    0    82   5.3   6.9   0.84  11.11  4.78  999
## 3: 2006    1    1    3    0    62   8.9  10.9   0.99  11.11  4.32  999
## 4: 2006    1    1    4    0    56   9.8  11.5   1.40  4.55  4.16  999
## 5: 2006    1    1    5    0    50   9.1  10.8   1.49  5.00  4.42  999
## ---
## 8718: 2006   12   31   19    0   305   4.5   6.0   0.57  4.55  3.49  999
## 8719: 2006   12   31   20    0   321   3.2   4.8   0.47  4.55  3.69  999
## 8720: 2006   12   31   21    0   276   3.1   5.0   0.40  4.35  4.09  999
## 8721: 2006   12   31   22    0   313   3.3   4.4   0.41  5.88  4.26  999
## 8722: 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: 1011.5   0.7   5.8   0.4   99   99
## 2: 1010.7   1.3   5.8   0.4   99   99
## 3: 1009.6   1.7   5.8   1.3   99   99
## 4: 1009.3   1.1   5.8   0.4   99   99
## 5: 1009.4   1.5   5.8  -0.8   99   99
## ---
## 8718: 1028.8   2.2   7.1 999.0   99   99
## 8719: 1028.8   2.7   7.1 999.0   99   99
## 8720: 1028.9   3.2   7.1 999.0   99   99
## 8721: 1029.0   3.5   7.1 999.0   99   99
## 8722: 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> <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> <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> <num> <num> <num> <num> <num> <int>
## 1: 2009    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> <num> <num> <num> <num> <num> <num>
## 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>
## 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> <num> <num> <num> <num> <num> <num>
## 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>
## 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

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```

##    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> <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>
##    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> <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

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##   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> <num> <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>
##   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> <num> <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> <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>
## 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> <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> <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> <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>
## 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> <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>
## 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> <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> <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> <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
library(data.table)
data <- as.data.table(all_data)

## Warning: Item 1 has 8718 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 2 has 8167 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 3 has 7601 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 4 has 8070 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 5 has 7932 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 6 has 8702 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 7 has 8729 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 8 has 8735 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 9 has 8692 rows but longest item has 52529; recycled with
## remainder.

```

```
## Warning: Item 10 has 8686 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 11 has 8659 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 12 has 8951 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 13 has 5711 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 14 has 8783 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 15 has 8347 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 16 has 8759 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 17 has 8759 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 18 has 8758 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 19 has 8760 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 20 has 8707 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 21 has 8722 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 22 has 8694 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 23 has 8745 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 24 has 8732 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 25 has 7844 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 26 has 8746 rows but longest item has 52529; recycled with
## remainder.
```

```

## Warning: Item 27 has 4409 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 28 has 8209 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 29 has 8753 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 30 has 8749 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 31 has 8695 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 32 has 8696 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 33 has 8660 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 34 has 8613 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 35 has 16103 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 36 has 51563 rows but longest item has 52529; recycled with
## remainder.

## Warning: Item 38 has 52480 rows but longest item has 52529; recycled with
## remainder.

data[data == 999] <- NA
print(data)

##          X1985.YY X1985.MM X1985.DD X1985.hh X1985.WD X1985.WSPD X1985.GST
##          <int>     <int>     <int>     <int>     <int>     <num>      <num>
## 1:       85         1         1         1        80        4         5
## 2:       85         1         1         2       100        4         5
## 3:       85         1         1         3       100        4         5
## 4:       85         1         1         4       110        4         5
## 5:       85         1         1         5        90        4         5
## ---
## 52525:    85         1        10         1       260       13        16
## 52526:    85         1        10         2       270       13        17
## 52527:    85         1        10         3       270       12        15
## 52528:    85         1        10         4       280       11        14
## 52529:    85         1        10         5       280       11        15
##          X1985.WVHT X1985.DPD X1985.APD X1985.MWD X1985.BAR X1985.ATMP X1985.WTMP
##          <num>      <num>      <num>     <int>      <num>      <num>      <num>

```

```

##      1:    99    99    99    NA 1030.0    5.1    6.7
##      2:    99    99    99    NA 1030.1    5.6    6.6
##      3:    99    99    99    NA 1029.4    5.8    6.7
##      4:    99    99    99    NA 1028.6    5.8    6.7
##      5:    99    99    99    NA 1027.8    5.3    6.7
##     ---
## 52525:    99    99    99    NA 1021.4   -8.0    5.5
## 52526:    99    99    99    NA 1021.5   -8.0    5.5
## 52527:    99    99    99    NA 1022.2   -8.1    5.8
## 52528:    99    99    99    NA 1023.1   -8.4    5.7
## 52529:    99    99    99    NA 1023.0   -8.6    5.8
##      X1985.DEWP X1985.VIS X1985.TIDE X1986.YY X1986.MM X1986.DD X1986.hh
##      <num>    <num>    <lgcl>    <int>    <int>    <int>    <int>
##      1:      NA    99    NA     86      1      1      1
##      2:      NA    99    NA     86      1      1      2
##      3:      NA    99    NA     86      1      1      3
##      4:      NA    99    NA     86      1      1      4
##      5:      NA    99    NA     86      1      1      5
##     ---
## 52525:      NA    99    NA     86      6     20     14
## 52526:      NA    99    NA     86      6     20     15
## 52527:      NA    99    NA     86      6     20     16
## 52528:      NA    99    NA     86      6     20     17
## 52529:      NA    99    NA     86      6     20     18
##      X1986.WD X1986.WSPD X1986.GST X1986.WVHT X1986.DPD X1986.APD X1986.MWD
##      <int>    <num>    <num>    <num>    <num>    <num>    <int>
##      1:     210      9     10    99.0    99.0    99.0    NA
##      2:     220      8     10    99.0    99.0    99.0    NA
##      3:     220      6     8    99.0    99.0    99.0    NA
##      4:     210      6     8    99.0    99.0    99.0    NA
##      5:     210      6     8    99.0    99.0    99.0    NA
##     ---
## 52525:     100      5     6    99.0    99.0    99.0    NA
## 52526:      60      4     4     0.2     2.9     3.4    NA
## 52527:      50      4     5     0.2     2.8     3.2    NA
## 52528:      40      7     8     0.2     2.5     2.9    NA
## 52529:      30      8     9     0.4     3.0     3.0    NA
##      X1986.BAR X1986.ATMP X1986.WTMP X1986.DEWP X1986.VIS X1986.TIDE X1987.YY
##      <num>    <num>    <num>    <num>    <num>    <lgcl>    <int>
##      1: 1009.3    4.7    4.3    NA     99    NA     87
##      2: 1009.2    4.0    4.3    NA     99    NA     87
##      3: 1009.3    3.9    4.3    NA     99    NA     87
##      4: 1009.0    3.9    4.3    NA     99    NA     87
##      5: 1008.4    3.9    4.3    NA     99    NA     87
##     ---
## 52525: 1010.8   14.4   14.3    NA     99    NA     87
## 52526: 1011.6   14.2   14.3    NA     99    NA     87
## 52527: 1011.4   14.4   14.4    NA     99    NA     87
## 52528: 1011.6   13.7   14.4    NA     99    NA     87
## 52529: 1012.1   13.2   14.3    NA     99    NA     87
##      X1987.MM X1987.DD X1987.hh X1987.WD X1987.WSPD X1987.GST X1987.WVHT
##      <int>    <int>    <int>    <int>    <num>    <num>    <num>
##      1:      1      1      1    290      7      8     2.4
##      2:      1      1      2    290      6      8     2.5

```

```

##   3:      1      1      3     300      6      7     2.6
##   4:      1      1      4     290      5      6     2.7
##   5:      1      1      5     340      6      7     2.4
##   ---
## 52525:    12      3     11     NA     99     99     0.7
## 52526:    12      3     12     NA     99     99     0.6
## 52527:    12      3     13     NA     99     99     0.7
## 52528:    12      3     14     NA     99     99     0.6
## 52529:    12      3     15     NA     99     99     0.5
##          X1987.DPD X1987.APD X1987.MWD X1987.BAR X1987.ATMP X1987.WTMP X1987.DEWP
##      <num>    <num>    <int>    <num>    <num>    <num>    <num>
##   1:    10.0     8.0     NA 1024.3     2.0     5.9     NA
##   2:    11.1     8.3     NA 1023.8     1.6     5.9     NA
##   3:    11.1     8.6     NA 1024.1     1.3     6.0     NA
##   4:    12.5     8.7     NA 1025.2     1.0     5.9     NA
##   5:    14.3     8.4     NA 1025.0     0.7     5.9     NA
##   ---
## 52525:    12.5     4.8     NA 1013.0     0.8     7.0     NA
## 52526:    12.5     4.8     NA 1013.3     1.0     7.0     NA
## 52527:    12.5     4.3     NA 1013.3     2.0     7.0     NA
## 52528:    12.5     4.0     NA 1013.8     2.0     7.0     NA
## 52529:    12.5     4.2     NA 1013.8     2.9     7.0     NA
##          X1987.VIS X1987.TIDE X1988.YY X1988.MM X1988.DD X1988.hh X1988.WD
##      <num>    <lgcl>    <int>    <int>    <int>    <int>    <int>
##   1:     99      NA      88      1      1      2     182
##   2:     99      NA      88      1      1      3     196
##   3:     99      NA      88      1      1      4     193
##   4:     99      NA      88      1      1      5     182
##   5:     99      NA      88      1      1      6     183
##   ---
## 52525:     99      NA      88      6     20     16     NA
## 52526:     99      NA      88      6     20     17     NA
## 52527:     99      NA      88      6     20     18     NA
## 52528:     99      NA      88      6     20     19     NA
## 52529:     99      NA      88      6     20     20     NA
##          X1988.WSPD X1988.GST X1988.WVHT X1988.DPD X1988.APD X1988.MWD X1988.BAR
##      <num>    <num>    <num>    <num>    <num>    <int>    <num>
##   1:     8.0     9.3     0.4     3.6     3.8     NA 1018.9
##   2:     8.1    10.3     0.4     3.0     3.5     NA 1019.0
##   3:     7.8     8.7     0.4     2.9     3.4     NA 1019.0
##   4:     6.9     8.9     0.3     2.6     3.7     NA 1018.9
##   5:     7.2     8.2     0.3    12.5     4.0     NA 1018.2
##   ---
## 52525:    99.0    99.0     0.4     7.7     7.1     NA 1016.3
## 52526:    99.0    99.0     0.4     7.1     6.5     NA 1015.1
## 52527:    99.0    99.0     0.4     8.3     6.5     NA 1014.3
## 52528:    99.0    99.0     0.4     8.3     5.5     NA 1013.4
## 52529:    99.0    99.0     0.5     7.7     4.8     NA 1012.7
##          X1988.ATMP X1988.WTMP X1988.DEWP X1988.VIS X1988.TIDE X1989.YY X1989.MM
##      <num>    <num>    <num>    <num>    <lgcl>    <int>    <int>
##   1:     4.6     5.1     NA     99      NA     89      1
##   2:     4.7     5.1     NA     99      NA     89      1
##   3:     4.4     5.1     NA     99      NA     89      1
##   4:     4.3     5.1     NA     99      NA     89      1

```

```

##      5:      4.3      5.1      NA      99      NA      89      1
##      ---
## 52525:    22.9     14.5      NA      99      NA      89      8
## 52526:    23.7     15.0      NA      99      NA      89      8
## 52527:    23.6     15.2      NA      99      NA      89      8
## 52528:    23.5     15.3      NA      99      NA      89      8
## 52529:    23.2     15.2      NA      99      NA      89      8
##          X1989.DD X1989.hh X1989.WD X1989.WSPD X1989.GST X1989.WVHT X1989.DPD
##      <int>   <int>   <int>   <num>   <num>   <num>   <num>
## 1:      1       1     329      9.0     11.2      0.3     2.9
## 2:      1       2     326      7.4      9.9      0.3     3.1
## 3:      1       3     340      8.2     11.4      0.2     3.0
## 4:      1       4     349      9.6     11.4      0.3     3.2
## 5:      1       5     345      9.0     10.6      0.4     3.3
##      ---
## 52525:    28       0     152      6.5      7.7      0.3    12.5
## 52526:    28       2     180      5.1      6.6      0.2    12.5
## 52527:    28       3     194      5.3      6.4      0.2    11.1
## 52528:    28       4     205      5.9      6.6      0.2    11.1
## 52529:    28       5     194      4.6      5.2      0.2    11.1
##          X1989.APD X1989.MWD X1989.BAR X1989.ATMP X1989.WTMP X1989.DEWP X1989.VIS
##      <num>   <int>   <num>   <num>   <num>   <num>   <num>
## 1:    3.2      NA 1020.1      1.7      4.7      NA     99
## 2:    3.4      NA 1022.3      1.1      4.7      NA     99
## 3:    3.5      NA 1022.5      0.2      4.7      NA     99
## 4:    3.4      NA 1022.5     -0.7      4.7      NA     99
## 5:    3.5      NA 1023.6     -1.6      4.7      NA     99
##      ---
## 52525:    4.3      NA 1020.2     17.2     16.9      NA     99
## 52526:    5.1      NA 1020.7     16.7     16.8      NA     99
## 52527:    5.4      NA 1021.0     16.7     16.8      NA     99
## 52528:    6.2      NA 1021.0     16.5     16.8      NA     99
## 52529:    7.7      NA 1020.5     16.4     16.8      NA     99
##          X1989.TIDE X1990.YY X1990.MM X1990.DD X1990.hh X1990.WD X1990.WSPD
##      <lgcl>   <int>   <int>   <int>   <int>   <int>   <num>
## 1:      NA      90      1       1       1     149      9.9
## 2:      NA      90      1       1       2     182      7.8
## 3:      NA      90      1       1       3     200      9.5
## 4:      NA      90      1       1       4     199      9.9
## 5:      NA      90      1       1       5     202     10.0
##      ---
## 52525:    NA      90      1       1      14      1     276     14.8
## 52526:    NA      90      1      14      2     273     13.0
## 52527:    NA      90      1      14      3     268     14.2
## 52528:    NA      90      1      14      4     260     11.4
## 52529:    NA      90      1      14      5     255     11.0
##          X1990.GST X1990.WVHT X1990.DPD X1990.APD X1990.MWD X1990.BAR X1990.ATMP
##      <num>   <num>   <num>   <num>   <int>   <num>   <num>
## 1:    11.6     1.2     7.1      5.5      NA 1003.1      5.4
## 2:     9.7     1.1     7.1      5.4      NA 1001.8      7.0
## 3:    10.9     1.0     7.1      5.4      NA 1000.5      8.8
## 4:    11.8     1.1     7.1      5.5      NA 999.6      8.6
## 5:    11.5     1.0     7.1      5.7      NA 998.2      8.3
##      ---

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## 52525:    18.7      0.9      4.0      3.9      NA    1015.0     -4.1
## 52526:    16.4      0.7      4.2      3.9      NA    1016.5     -5.1
## 52527:    18.7      0.6      4.2      3.8      NA    1016.8     -5.7
## 52528:    14.0      0.6      3.8      3.8      NA    1017.7     -6.1
## 52529:    14.0      0.5      3.8      3.7      NA    1017.9     -6.1
##          X1990.WTMP X1990.DEWP X1990.VIS X1990.TIDE X1991.YY X1991.MM X1991.DD
##          <num>      <num>      <num>      <lgcl>      <int>      <int>      <int>
## 1:       3.3        NA       99        NA       91        1        1
## 2:       3.2        NA       99        NA       91        1        1
## 3:       3.2        NA       99        NA       91        1        1
## 4:       3.2        NA       99        NA       91        1        1
## 5:       3.1        NA       99        NA       91        1        1
## ---
## 52525:    2.9        NA       99        NA       91        1        7
## 52526:    2.9        NA       99        NA       91        1        7
## 52527:    2.9        NA       99        NA       91        1        7
## 52528:    2.9        NA       99        NA       91        1        7
## 52529:    2.8        NA       99        NA       91        1        7
##          X1991.hh X1991.WD X1991.WSPD X1991.GST X1991.WVHT X1991.DPD X1991.APD
##          <int>      <int>      <num>      <num>      <num>      <num>      <num>
## 1:       1        343       8.7      10.9       0.8       5.9       5.1
## 2:       2        336       7.3      10.7       0.7       7.1       5.0
## 3:       3        328       9.1      11.2       0.7       7.1       5.2
## 4:       4        334      10.6      12.3       0.8       6.7       4.7
## 5:       5        331       9.4      12.0       0.7       6.7       5.0
## ---
## 52525:    8        327       7.2      8.3       0.3       8.3       5.1
## 52526:    9        329       6.3      7.6       0.3       9.1       5.2
## 52527:   10        345       5.3      6.4       0.3      14.3       5.1
## 52528:   11        354       7.2      8.5       0.4       8.3       4.6
## 52529:   12        358       9.4     11.3       0.4       8.3       4.3
##          X1991.MWD X1991.BAR X1991.ATMP X1991.WTMP X1991.DEWP X1991.VIS
##          <int>      <num>      <num>      <num>      <num>      <num>
## 1:       NA     1031.1     -3.4       6.4      NA       99
## 2:       NA     1031.7     -4.1       6.4      NA       99
## 3:       NA     1031.8     -4.3       6.4      NA       99
## 4:       NA     1032.6     -4.4       6.4      NA       99
## 5:       NA     1032.9     -4.9       6.4      NA       99
## ---
## 52525:    NA     1029.6      1.1       5.6      NA       99
## 52526:    NA     1029.8      0.8       5.6      NA       99
## 52527:    NA     1029.8      0.5       5.6      NA       99
## 52528:    NA     1030.3      0.2       5.6      NA       99
## 52529:    NA     1031.2     -0.3       5.6      NA       99
##          X1991.TIDE X1992.YY X1992.MM X1992.DD X1992.hh X1992.WD X1992.WSPD
##          <lgcl>      <int>      <int>      <int>      <int>      <int>      <num>
## 1:       NA       92        1        1        2      260       5.6
## 2:       NA       92        1        1        3      269       5.0
## 3:       NA       92        1        1        4      281       5.2
## 4:       NA       92        1        1        5      280       5.4
## 5:       NA       92        1        1        6      271       5.6
## ---
## 52525:    NA       92        1        5       23      316      11.2
## 52526:    NA       92        1        6        0      318      11.3

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## 52527:      NA    92     1     6     1    320    10.8
## 52528:      NA    92     1     6     2    318    10.8
## 52529:      NA    92     1     6     3    322    10.3
##          X1992.GST X1992.WVHT X1992.DPD X1992.APD X1992.MWD X1992.BAR X1992.ATMP
##          <num>     <num>     <num>     <num>     <int>     <num>     <num>
## 1:       6.3      1.1      7.7      7.5     NA 1034.3     1.7
## 2:       5.9      1.1     11.1      7.6     NA 1034.2     1.7
## 3:       6.4      1.0     10.0      8.1     NA 1034.1     1.7
## 4:       6.4      1.0     10.0      8.1     NA 1033.5     1.6
## 5:       6.3      1.0     10.0      8.3     NA 1033.4     1.3
## ---
## 52525:    13.7     1.5     12.5      7.2     NA 1001.0     6.3
## 52526:    14.2     1.7     8.3      7.1     NA 1001.0     5.6
## 52527:    13.5     1.6     8.3      6.9     NA 1000.8     5.1
## 52528:    13.0     1.6     9.1      7.2     NA 1000.8     5.0
## 52529:    12.4     1.4     9.1      6.8     NA 1000.6     4.8
##          X1992.WTMP X1992.DEWP X1992.VIS X1992.TIDE X1993.YY X1993.MM X1993.DD
##          <num>     <num>     <num>     <lgcl>     <int>     <int>     <int>
## 1:       5.6      NA      99     NA     93     1     1
## 2:       5.6      NA      99     NA     93     1     1
## 3:       5.6      NA      99     NA     93     1     1
## 4:       5.6      NA      99     NA     93     1     1
## 5:       5.5      NA      99     NA     93     1     1
## ---
## 52525:    5.6      NA      99     NA     93     1     16
## 52526:    5.6      NA      99     NA     93     1     16
## 52527:    5.6      NA      99     NA     93     1     16
## 52528:    5.6      NA      99     NA     93     1     16
## 52529:    5.6      NA      99     NA     93     1     16
##          X1993.hh X1993.WD X1993.WSPD X1993.GST X1993.WVHT X1993.DPD X1993.APD
##          <int>     <int>     <num>     <num>     <num>     <num>     <num>
## 1:       1     245     7.3     8.2     0.8    10.0     7.7
## 2:       2     243     8.1     8.9     0.8    10.0     8.0
## 3:       3     261     7.7     8.8     0.7    9.1     7.9
## 4:       4     269     7.8     8.6     0.8    9.1     7.8
## 5:       5     270     5.0     5.6     0.8    9.1     7.8
## ---
## 52525:    15     294     4.7     5.5     1.3    12.5    10.8
## 52526:    16     289     3.5     4.5     1.2    12.5    10.3
## 52527:    17     321     2.5     3.7     1.2    11.1    10.3
## 52528:    18     299     2.8     3.4     1.3    12.5    10.0
## 52529:    19     306     1.7     2.7     1.2    10.0     9.8
##          X1993.MWD X1993.BAR X1993.ATMP X1993.WTMP X1993.DEWP X1993.VIS
##          <int>     <num>     <num>     <num>     <num>     <num>
## 1:      NA 1006.3     7.1     4.7     NA     99
## 2:      NA 1006.5     7.4     4.4     NA     99
## 3:      NA 1006.5     7.8     4.4     NA     99
## 4:      NA 1007.0     7.9     4.4     NA     99
## 5:      NA 1007.1     7.1     4.4     NA     99
## ---
## 52525:    NA 1018.9    -0.4     3.5     NA     99
## 52526:    NA 1017.9    -0.3     3.5     NA     99
## 52527:    NA 1016.4     0.1     3.5     NA     99
## 52528:    NA 1015.8     1.9     3.5     NA     99

```

```

## 52529:      NA    1015.0      2.9      3.6      NA      99
##          X1993.TIDE X1994.YY X1994.MM X1994.DD X1994.hh X1994.WD X1994.WSPD
##          <lgcl>   <int>   <int>   <int>   <int>   <int>   <num>
## 1:      NA     94      1      1      1     252     10.3
## 2:      NA     94      1      1      2     259     11.7
## 3:      NA     94      1      1      3     261     11.8
## 4:      NA     94      1      1      4     262     10.4
## 5:      NA     94      1      1      5     259     10.0
## ---
## 52525:      NA     94      1     18      3     169     11.3
## 52526:      NA     94      1     18      4     164     10.7
## 52527:      NA     94      1     18      5     164     10.6
## 52528:      NA     94      1     18      6     185     11.1
## 52529:      NA     94      1     18      7     295      9.4
##          X1994.GST X1994.WVHT X1994.DPD X1994.APD X1994.MWD X1994.BAR X1994.ATMP
##          <num>   <num>   <num>   <num>   <int>   <num>   <num>
## 1:    13.3     0.7     3.4     3.4     269   1022.7    -1.5
## 2:    14.7     0.7     3.4     3.4     270   1023.4    -1.4
## 3:    14.3     0.9     4.0     3.7     265   1023.7    -1.6
## 4:    12.6     0.9     4.0     3.5     271   1024.1    -1.4
## 5:    12.1     0.8     4.0     3.5     273   1024.3    -0.8
## ---
## 52525:    13.7     1.8     5.9     4.9     139   1008.2     6.2
## 52526:    13.0     1.9     6.2     5.0     142   1006.1     6.2
## 52527:    12.7     2.1     6.2     5.1     147   1003.5     5.5
## 52528:    13.7     1.7     5.9     4.8     146   1001.7     7.4
## 52529:    12.6     1.9     6.2     4.9     151   1001.3     5.9
##          X1994.WTMP X1994.DEWP X1994.VIS X1994.TIDE X1995.YY X1995.MM X1995.DD
##          <num>   <num>   <num>   <lgcl>   <int>   <int>   <int>
## 1:    5.5      NA    26.9      NA     95      1      1
## 2:    5.5      NA    27.0      NA     95      1      1
## 3:    5.5      NA    26.5      NA     95      1      1
## 4:    5.5      NA    27.1      NA     95      1      1
## 5:    5.5      NA    27.3      NA     95      1      1
## ---
## 52525:    3.2      NA    13.9      NA     95      1     25
## 52526:    3.2      NA    14.2      NA     95      1     25
## 52527:    3.2      NA    14.7      NA     95      1     25
## 52528:    3.2      NA    14.6      NA     95      1     25
## 52529:    3.2      NA    15.1      NA     95      1     25
##          X1995.hh X1995.WD X1995.WSPD X1995.GST X1995.WVHT X1995.DPD X1995.APD
##          <int>   <int>   <num>   <num>   <num>   <num>   <num>
## 1:    1     206     8.8    11.6     0.6     3.0     3.3
## 2:    2     204     9.9    12.0     0.7     3.1     3.3
## 3:    3     205    11.5    14.2     0.8     3.3     3.3
## 4:    4     215    10.5    13.2     0.9     3.7     3.6
## 5:    5     222     8.4    9.8     0.8     3.7     3.4
## ---
## 52525:    0     300     8.7    11.3     1.2     5.9     4.3
## 52526:    1     302     9.5    11.7     1.3     6.2     4.3
## 52527:    2     305     9.4    11.6     1.4     5.9     4.4
## 52528:    3     305     9.7    11.2     1.3     6.2     4.3
## 52529:    4     309     8.9    11.5     1.4     5.9     4.5
##          X1995.MWD X1995.BAR X1995.ATMP X1995.WTMP X1995.DEWP X1995.VIS

```

```

##          <int>    <num>    <num>    <num>    <num>    <num>
## 1:      217 1023.8     3.5     NA     NA 21.7
## 2:      226 1022.5     4.1     NA     NA 22.6
## 3:      217 1021.5     5.1     NA     NA 21.7
## 4:      229 1021.4     4.8     NA     NA 22.9
## 5:      242 1021.1     3.9     NA     NA 24.2
## ---
## 52525:      57 1007.0     0.8     NA     NA 5.7
## 52526:      61 1007.2     0.4     NA     NA 6.1
## 52527:      58 1007.7     0.1     NA     NA 5.8
## 52528:      64 1008.0     0.0     NA     NA 6.4
## 52529:      64 1008.5    -0.2     NA     NA 6.4
##          X1995.TIDE X1996.YY X1996.MM X1996.DD X1996.hh X1996.WD X1996.WSPD
##          <lgcl>    <int>    <int>    <int>    <int>    <int>    <num>
## 1:       NA     96      1      1      1    225     2.8
## 2:       NA     96      1      1      2    234     1.9
## 3:       NA     96      1      1      3    233     2.8
## 4:       NA     96      1      1      4    263     3.2
## 5:       NA     96      1      1      5    274     3.2
## ---
## 52525:     NA     96     11     12     18    271     7.0
## 52526:     NA     96     11     12     19    293     4.8
## 52527:     NA     96     11     12     20    285     7.0
## 52528:     NA     96     11     12     21    295     6.8
## 52529:     NA     96     11     12     22    299     6.3
##          X1996.GST X1996.WVHT X1996.DPD X1996.APD X1996.MWD X1996.BAR X1996.ATMP
##          <num>    <num>    <num>    <num>    <int>    <num>    <num>
## 1:      3.2     0.17   12.50     7.35     82 1014.0     3.5
## 2:      2.3     0.18   12.50     7.21     74 1013.5     3.2
## 3:      3.8     0.17   12.50     6.93     77 1013.3     3.5
## 4:      3.8     0.15   12.50     7.36     89 1013.4     3.2
## 5:      3.8     0.16   12.50     7.69     85 1013.3     3.3
## ---
## 52525:     9.5     0.99  11.11     4.70     92 1024.1     5.0
## 52526:     8.0     0.94  12.50     4.65     66 1024.8     4.8
## 52527:     9.9     0.94  11.11     4.93     88 1025.2     5.5
## 52528:     8.6     0.94  11.11     4.42     88 1026.0     5.1
## 52529:     7.5     0.88  11.11     5.11     83 1027.1     5.1
##          X1996.WTMP X1996.DEWP X1996.VIS X1996.TIDE X1997.YY X1997.MM X1997.DD
##          <num>    <num>    <num>    <lgcl>    <int>    <int>    <int>
## 1:      5.5      NA     99     NA     97      1      1
## 2:      5.5      NA     99     NA     97      1      1
## 3:      5.5      NA     99     NA     97      1      1
## 4:      5.5      NA     99     NA     97      1      1
## 5:      5.5      NA     99     NA     97      1      1
## ---
## 52525:    10.6      NA     99     NA     97      2     16
## 52526:    10.6      NA     99     NA     97      2     16
## 52527:    10.6      NA     99     NA     97      2     17
## 52528:    10.6      NA     99     NA     97      2     17
## 52529:    10.5      NA     99     NA     97      2     17
##          X1997.hh X1997.WD X1997.WSPD X1997.GST X1997.WVHT X1997.DPD X1997.APD
##          <int>    <int>    <num>    <num>    <num>    <num>    <num>
## 1:      1      312    10.8    13.8     1.41    5.26    4.14

```

```

##   2:      2    323     11.4    14.0    1.43    4.55    4.25
##   3:      3    336     11.4    14.2    1.57    5.56    4.40
##   4:      4    333     10.9    14.0    1.83    6.67    4.76
##   5:      5    332     10.5    14.0    1.81    6.67    4.79
##   ---
## 52525:    22     35      5.6     7.6     0.56   10.00    3.81
## 52526:    23     19      4.5     6.1     0.58   10.00    3.88
## 52527:     0     NA    99.0    99.0   99.00   99.00   99.00
## 52528:     1     47      4.7     6.4     0.58   11.11    4.23
## 52529:     2     59      4.4     5.9     0.55   10.00    4.27
##          X1997.MWD X1997.BAR X1997.ATMP X1997.WTMP X1997.DEWP X1997.VIS
##          <int>    <num>    <num>    <num>    <num>    <num>
##   1:      40   1026.2    -9.1     6.3     NA     99
##   2:     355   1026.8    -9.2     6.3     NA     99
##   3:      42   1027.3    -9.7     6.3     NA     99
##   4:      45   1027.6   -10.6     6.3     NA     99
##   5:      32   1027.7   -10.8     6.3     NA     99
##   ---
## 52525:     94   1027.4    -1.3     3.5     NA     99
## 52526:    100   1028.1    -1.4     3.5     NA     99
## 52527:     NA   9999.0     NA     NA     NA     99
## 52528:     78   1028.1    -1.4     3.2     NA     99
## 52529:     89   1028.1    -1.2     3.2     NA     99
##          X1997.TIDE X1998.YY X1998.MM X1998.DD X1998.hh X1998.WD X1998.WSPD
##          <lgcl>    <int>    <int>    <int>    <int>    <int>    <num>
##   1:     NA      98       1       1       1    287    10.6
##   2:     NA      98       1       1       2    286    11.7
##   3:     NA      98       1       1       3    286    11.9
##   4:     NA      98       1       1       4    295    12.2
##   5:     NA      98       1       1       5    297    13.1
##   ---
## 52525:     NA      98      12      24      18    315     4.5
## 52526:     NA      98      12      24      19    277     3.1
## 52527:     NA      98      12      24      20    285     4.4
## 52528:     NA      98      12      24      21    262     4.7
## 52529:     NA      98      12      24      22    247     4.6
##          X1998.GST X1998.WVHT X1998.DPD X1998.APD X1998.MWD X1998.BAR X1998.ATMP
##          <num>    <num>    <num>    <num>    <int>    <num>    <num>
##   1:    13.9     1.29     4.35     4.11     NA  1015.4    -6.5
##   2:    15.5     1.12     4.00     4.00     NA  1016.3    -7.0
##   3:    15.0     1.04     4.00     3.94     NA  1017.1    -7.6
##   4:    14.7     1.26     4.17     4.02     NA  1017.9    -8.1
##   5:    16.2     1.25     4.35     4.07     NA  1018.8    -8.8
##   ---
## 52525:     6.1     0.41     2.86     3.50     NA  1022.1    -2.8
## 52526:     5.3     0.35     2.70     3.57     NA  1021.2    -2.5
## 52527:     6.1     0.31    10.00     4.05     NA  1021.2    -2.0
## 52528:     6.2     0.28    10.00     4.28     NA  1022.1    -1.5
## 52529:     6.1     0.27     9.09     4.20     NA  1022.6    -1.1
##          X1998.WTMP X1998.DEWP X1998.VIS X1998.TIDE X1999.YYYY X1999.MM X1999.DD
##          <num>    <num>    <num>    <lgcl>    <int>    <int>    <int>
##   1:     5.1      NA      99     NA     1999      1      1
##   2:     5.2      NA      99     NA     1999      1      1
##   3:     5.6      NA      99     NA     1999      1      1

```

```

##   4:      5.6      NA      99      NA    1999       1       1
##   5:      5.6      NA      99      NA    1999       1       1
##   ---
## 52525:     6.3      NA      99      NA    1999       4      12
## 52526:     6.3      NA      99      NA    1999       4      12
## 52527:     6.3      NA      99      NA    1999       4      12
## 52528:     6.3      NA      99      NA    1999       4      12
## 52529:     6.3      NA      99      NA    1999       4      12
##          X1999.hh X1999.WD X1999.WSPD X1999.GST X1999.WVHT X1999.DPD X1999.APD
##          <int>   <int>   <num>   <num>   <num>   <num>   <num>
##   1:        1      218      5.6      7.3     0.31    11.11    5.51
##   2:        2      226      5.7      7.0     0.32    12.50    6.53
##   3:        3      228      5.7      7.3     0.31    11.11    6.17
##   4:        4      237      5.9      7.7     0.39    11.11    5.02
##   5:        5      235      5.7      7.5     0.42    11.11    4.81
##   ---
## 52525:     19      132      1.5      2.1     0.45     9.09    3.90
## 52526:     20      145      1.2      2.0     0.38     8.33    4.30
## 52527:     21      147      1.0      1.3     0.38    10.00    4.79
## 52528:     22      131      1.5      2.0     0.36     8.33    5.11
## 52529:     23      177      1.2      1.4     0.37    11.11    5.60
##          X1999.MWD X1999.BAR X1999.ATMP X1999.WTMP X1999.DEWP X1999.VIS
##          <int>   <num>   <num>   <num>   <num>   <num>
##   1:      NA    1016.5     -4.0      5.7      NA     99
##   2:      NA    1015.8     -3.9      5.7      NA     99
##   3:      NA    1015.3     -3.9      5.7      NA     99
##   4:      NA    1015.0     -3.8      5.6      NA     99
##   5:      NA    1014.9     -3.9      5.6      NA     99
##   ---
## 52525:     NA    1001.9      5.5      5.2      NA     99
## 52526:     NA    1001.8      5.9      5.6      NA     99
## 52527:     NA    1001.8      6.4      5.6      NA     99
## 52528:     NA    1001.9      6.3      5.5      NA     99
## 52529:     NA    1002.5      6.4      5.6      NA     99
##          X1999.TIDE X2001.YYYY X2001.MM X2001.DD X2001.hh X2001.WD X2001.WSPD
##          <lgcl>   <int>   <int>   <int>   <int>   <int>   <num>
##   1:      NA     2001       1       1       1     255    14.3
##   2:      NA     2001       1       1       2     263    15.8
##   3:      NA     2001       1       1       3     267    14.4
##   4:      NA     2001       1       1       4     270    13.9
##   5:      NA     2001       1       1       5     268    12.9
##   ---
## 52525:     NA     2001      12      30      18     246    11.3
## 52526:     NA     2001      12      30      19     249    11.1
## 52527:     NA     2001      12      30      20     249    10.7
## 52528:     NA     2001      12      30      21     245    11.1
## 52529:     NA     2001      12      30      22     235    10.2
##          X2001.GST X2001.WVHT X2001.DPD X2001.APD X2001.MWD X2001.BAR X2001.ATMP
##          <num>   <num>   <num>   <num>   <int>   <num>   <num>
##   1:     17.5     1.50     4.35     4.17      NA   1002.0    -1.9
##   2:     19.9     1.68     4.76     4.31      NA   1002.4    -1.9
##   3:     17.5     1.64     5.00     4.37      NA   1003.6    -2.1
##   4:     17.6     1.55     4.76     4.21      NA   1004.6    -2.2
##   5:     15.6     1.47     4.76     4.16      NA   1005.5    -2.3

```

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##   ---
## 52525:    14.0     0.98     3.85     3.48      NA    1004.8     0.5
## 52526:    13.9     0.98     3.57     3.50      NA    1004.9     0.9
## 52527:    13.0     0.98     3.85     3.45      NA    1005.4     1.3
## 52528:    13.4     0.92     3.45     3.42      NA    1005.8     1.7
## 52529:    12.8     0.84     3.57     3.40      NA    1006.5     1.6
##          X2001.WTMP X2001.DEWP X2001.VIS X2001.TIDE X2002.YYYY X2002.MM X2002.DD
##          <num>     <num>     <num>     <num>     <int>     <int>     <int>
## 1:        4.3      -7.1      99       99     2002       1       1
## 2:        4.3      -7.3      99       99     2002       1       1
## 3:        4.3      -7.2      99       99     2002       1       1
## 4:        4.4      -8.3      99       99     2002       1       1
## 5:        4.4      -7.8      99       99     2002       1       1
##   ---
## 52525:    7.1      -8.0      99       99     2002      12      30
## 52526:    7.1      -8.2      99       99     2002      12      30
## 52527:    7.1      -8.4      99       99     2002      12      30
## 52528:    7.1      -8.6      99       99     2002      12      30
## 52529:    7.1      -6.8      99       99     2002      12      30
##          X2002.hh X2002.WD X2002.WSPD X2002.GST X2002.WVHT X2002.DPD X2002.APD
##          <int>     <int>     <num>     <num>     <num>     <num>     <num>
## 1:        1      234      9.5     11.5      0.66     3.13     3.09
## 2:        2      232      9.7     12.4      0.73     3.57     3.26
## 3:        3      255     10.5     12.5      0.80     3.70     3.37
## 4:        4      261     10.1     12.4      0.79     3.70     3.45
## 5:        5      258     10.1     12.4      0.85     3.57     3.38
##   ---
## 52525:    18      318      4.3      5.8      0.70     5.56     3.66
## 52526:    19      306      2.7      4.7      0.57     5.26     3.95
## 52527:    20      284      2.6      4.2      0.53     4.76     4.03
## 52528:    21      288      2.0      2.9      0.50     4.76     4.20
## 52529:    22      275      3.3      4.2      0.53     5.00     4.26
##          X2002.MWD X2002.BAR X2002.ATMP X2002.WTMP X2002.DEWP X2002.VIS
##          <int>     <num>     <num>     <num>     <num>     <num>
## 1:      NA    1013.4      0.0      6.7     -8.3      99
## 2:      NA    1013.9     -0.5      6.7     -8.1      99
## 3:      NA    1013.5     -0.4      6.7     -8.1      99
## 4:      NA    1013.4     -0.4      6.7     -8.5      99
## 5:      NA    1013.4     -0.5      6.7     -7.1      99
##   ---
## 52525:    NA    1025.8     -1.8      5.6    -10.9      99
## 52526:    NA    1026.3     -1.2      5.6     -9.1      99
## 52527:    NA    1026.6     -0.8      5.6    -10.2      99
## 52528:    NA    1026.7     -0.4      5.5    -10.7      99
## 52529:    NA    1027.3     -0.3      5.6    -10.9      99
##          X2002.TIDE X2003.YYYY X2003.MM X2003.DD X2003.hh X2003.WD X2003.WSPD
##          <num>     <int>     <int>     <int>     <int>     <int>     <num>
## 1:      99     2003       1       1       1     183      3.4
## 2:      99     2003       1       1       2     180      4.2
## 3:      99     2003       1       1       3     207      6.4
## 4:      99     2003       1       1       4     204      7.3
## 5:      99     2003       1       1       5     211      5.0
##   ---
## 52525:    99     2003      12      31       0     273     10.6

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## 52526:      99      2003      12      31      1      271      9.8
## 52527:      99      2003      12      31      2      262      9.9
## 52528:      99      2003      12      31      3      263      9.8
## 52529:      99      2003      12      31      4      267      9.2
##          X2003.GST X2003.WVHT X2003.DPD X2003.APD X2003.MWD X2003.BAR X2003.ATMP
##          <num>    <num>    <num>    <num>    <int>    <num>    <num>
## 1:       3.8      0.93     6.67     4.92     NA   1012.6      4.7
## 2:       5.0      0.89     6.25     4.91     NA   1011.8      5.0
## 3:       7.4      0.80     6.67     4.89     NA   1011.1      5.9
## 4:       8.2      0.70     6.67     4.73     NA   1010.3      6.0
## 5:       6.3      0.69     6.67     4.08     NA   1009.6      6.6
## ---
## 52525:     12.7     1.15     4.00     3.75     NA   1010.0      6.4
## 52526:     12.6     1.14     4.17     3.78     NA   1011.4      6.3
## 52527:     12.1     1.00     3.85     3.61     NA   1012.5      5.7
## 52528:     12.0     1.06     3.70     3.54     NA   1012.9      5.5
## 52529:     11.8     0.88     3.57     3.47     NA   1013.2      5.5
##          X2003.WTMP X2003.DEWP X2003.VIS X2003.TIDE X2004.YYYY X2004.MM X2004.DD
##          <num>    <num>    <num>    <num>    <int>    <int>    <int>
## 1:       6.0      4.6      99      99     2004      1      1
## 2:       6.0      4.9      99      99     2004      1      1
## 3:       6.0      5.8      99      99     2004      1      1
## 4:       6.0      5.3      99      99     2004      1      1
## 5:       6.0      5.3      99      99     2004      1      1
## ---
## 52525:     5.1     -1.3     99      99     2004     12     30
## 52526:     5.1     -1.9     99      99     2004     12     30
## 52527:     5.1     -1.6     99      99     2004     12     30
## 52528:     5.1     -1.2     99      99     2004     12     30
## 52529:     5.1     -1.1     99      99     2004     12     30
##          X2004.hh X2004.WD X2004.WSPD X2004.GST X2004.WVHT X2004.DPD X2004.APD
##          <int>    <int>    <num>    <num>    <num>    <num>    <num>
## 1:       1      214      9.7     11.7     0.43     2.78     2.89
## 2:       2      227      9.9     12.2    99.00    99.00    99.00
## 3:       3      232     11.8     14.5     0.96     3.45     3.34
## 4:       4      232      9.2     11.3     1.00     3.57     3.43
## 5:       5      227     10.7     12.5     0.83     3.45     3.30
## ---
## 52525:     12      334      5.8      6.8     0.48     4.00     3.59
## 52526:     13      347      6.1      6.9     0.56     2.94     3.30
## 52527:     14      350      5.8      6.5     0.66     3.13     3.37
## 52528:     15      346      6.5      7.6     0.68     3.23     3.38
## 52529:     16      353      4.6      5.7     0.60     4.00     3.42
##          X2004.MWD X2004.BAR X2004.ATMP X2004.WTMP X2004.DEWP X2004.VIS
##          <int>    <num>    <num>    <num>    <num>    <num>
## 1:      NA  1014.2      5.1      5.2      0.0      99
## 2:      NA  1013.8      4.8      5.2     -0.8      99
## 3:      NA  1013.0      5.1      5.2     -0.2      99
## 4:      NA  1013.2      5.2      5.2     -0.7      99
## 5:      NA  1012.5      5.4      5.2     -0.1      99
## ---
## 52525:    NA  1029.8      2.1      5.9     -1.7      99
## 52526:    NA  1030.5      2.1      5.9     -1.5      99
## 52527:    NA  1031.7      2.4      5.9     -0.9      99

```

```

## 52528:      NA   1032.5      2.4      5.9     -0.9      99
## 52529:      NA   1032.1      2.4      6.0      0.3      99
##          X2004.TIDE X2005.YYYY X2005.MM X2005.DD X2005.hh X2005.mm X2005.WD
##          <num>    <int>    <int>    <int>    <int>    <int>    <int>
## 1:       99    2005      1      1      1      0     193
## 2:       99    2005      1      1      2      0     212
## 3:       99    2005      1      1      3      0     210
## 4:       99    2005      1      1      4      0     237
## 5:       99    2005      1      1      5      0     210
## ---
## 52525:      99    2005      1     12     19      0      67
## 52526:      99    2005      1     12     20      0      71
## 52527:      99    2005      1     12     21      0      71
## 52528:      99    2005      1     12     22      0      65
## 52529:      99    2005      1     12     23      0      54
##          X2005.WSPD X2005.GST X2005.WVHT X2005.DPD X2005.APD X2005.MWD X2005.BAR
##          <num>    <num>    <num>    <num>    <num>    <int>    <num>
## 1:      8.3    10.5    0.78    3.85    3.57    NA 1022.1
## 2:      7.0     8.9    0.90    3.13    3.50    NA 1022.0
## 3:      8.8    11.2    1.00    4.17    3.70    NA 1021.1
## 4:      6.8     8.0    1.00    3.33    3.79    NA 1021.4
## 5:      5.7     6.7    0.84    3.57    3.82    NA 1020.5
## ---
## 52525:      9.3    11.1    2.21    6.67    5.27    NA 1025.0
## 52526:      9.6    11.2    2.34    7.14    5.37    NA 1024.1
## 52527:      8.7    10.5    2.33    7.14    5.27    NA 1024.2
## 52528:      7.8     9.5    2.42    7.69    5.67    NA 1024.4
## 52529:      7.6     9.1    2.53    7.69    5.84    NA 1024.3
##          X2005.ATMP X2005.WTMP X2005.DEWP X2005.VIS X2005.TIDE X2006.YYYY
##          <num>    <num>    <num>    <num>    <num>    <int>
## 1:      8.3     6.3     6.1     99      99    2006
## 2:      8.2     6.3     5.2     99      99    2006
## 3:      8.7     6.3     5.1     99      99    2006
## 4:      7.9     6.3     5.0     99      99    2006
## 5:      7.4     6.3     5.0     99      99    2006
## ---
## 52525:      3.5     5.5     3.3     99      99    2006
## 52526:      3.7     5.5     3.5     99      99    2006
## 52527:      4.0     5.5     3.8     99      99    2006
## 52528:      4.3     5.2     4.1     99      99    2006
## 52529:      4.3     5.2     4.2     99      99    2006
##          X2006.MM X2006.DD X2006.hh X2006.mm X2006.WD X2006.WSPD X2006.GST
##          <int>    <int>    <int>    <int>    <int>    <num>    <num>
## 1:       1       1       1      0     83      4.9     6.0
## 2:       1       1       2      0     82      5.3     6.9
## 3:       1       1       3      0     62      8.9    10.9
## 4:       1       1       4      0     56      9.8    11.5
## 5:       1       1       5      0     50      9.1    10.8
## ---
## 52525:       1       9       1      0     340      1.8     2.4
## 52526:       1       9       2      0     12      1.6     2.4
## 52527:       1       9       3      0     44      2.6     3.4
## 52528:       1       9       4      0     62      3.5     4.4
## 52529:       1       9       5      0    120      2.0     2.7

```

```

##          X2006.WVHT X2006.DPD X2006.APD X2006.MWD X2006.BAR X2006.ATMP X2006.WTMP
##          <num>    <num>    <num>    <int>    <num>    <num>    <num>
## 1:      0.89     10.00     5.09     NA     1011.5     0.7     5.8
## 2:      0.84     11.11     4.78     NA     1010.7     1.3     5.8
## 3:      0.99     11.11     4.32     NA     1009.6     1.7     5.8
## 4:      1.40     4.55      4.16     NA     1009.3     1.1     5.8
## 5:      1.49     5.00      4.42     NA     1009.4     1.5     5.8
##  ---
## 52525:   0.36     10.00     5.61     NA     1021.2     1.3     4.4
## 52526:   0.39     10.00     5.44     NA     1021.9     1.6     4.3
## 52527:   0.44     10.00     5.42     NA     1021.9     1.4     4.3
## 52528:   0.41     10.00     5.38     NA     1021.9     1.6     4.3
## 52529:   0.44     9.09      6.30     NA     1022.0     1.9     4.3
##          X2006.DEWP X2006.VIS X2006.TIDE X2007..YY X2007.MM X2007.DD X2007.hh
##          <num>    <num>    <num>    <int>    <int>    <int>    <int>
## 1:      0.4       99        99     2007      1       1       0
## 2:      0.4       99        99     2007      1       1       1
## 3:      1.3       99        99     2007      1       1       2
## 4:      0.4       99        99     2007      1       1       3
## 5:     -0.8       99        99     2007      1       1       4
##  ---
## 52525:  -2.2      99        99     2007      1      16       2
## 52526:  -2.7      99        99     2007      1      16       3
## 52527:  -2.0      99        99     2007      1      16       4
## 52528:  -1.6      99        99     2007      1      16       5
## 52529:  -1.0      99        99     2007      1      16       6
##          X2007.mm X2007.WDIR X2007.WSPD X2007.GST X2007.WVHT X2007.DPD X2007.APD
##          <int>    <int>    <num>    <num>    <num>    <num>    <num>
## 1:      0        209      2.2      3.1     0.39     5.00     4.32
## 2:      0        184      1.6      2.3     0.37     4.76     4.33
## 3:      0        173      2.8      4.0     0.33     4.17     4.24
## 4:      0        183      5.6      6.7     0.32     4.17     4.19
## 5:      0        201      6.0      7.1     0.32     2.50     3.38
##  ---
## 52525:   0        16       1.0      2.2     1.40     6.67     5.38
## 52526:   0        10       2.5      3.8     1.51     6.67     5.49
## 52527:   0        343      3.5      4.6     1.41     6.67     5.63
## 52528:   0        353      0.4      1.6     1.30     6.67     5.52
## 52529:   0        140      1.4      2.0     1.23     6.25     5.57
##          X2007.MWD X2007.PRES X2007.ATMP X2007.WTMP X2007.DEWP X2007.VIS
##          <int>    <num>    <num>    <num>    <num>    <num>
## 1:     NA     1029.0     3.6      7.1     NA      99
## 2:     NA     1028.8     3.5      7.1     NA      99
## 3:     NA     1028.9     3.6      7.1     NA      99
## 4:     NA     1028.3     3.1      7.1     NA      99
## 5:     NA     1028.7     2.8      7.1     NA      99
##  ---
## 52525:   NA     1007.8     0.1      6.6     NA      99
## 52526:   NA     1007.3     0.4      6.6     NA      99
## 52527:   NA     1007.3     0.5      6.6     NA      99
## 52528:   NA     1006.3     1.6      6.6     NA      99
## 52529:   NA     1005.5     2.4      6.6     NA      99
##          X2007.TIDE X2008..YY X2008.MM X2008.DD X2008.hh X2008.mm X2008.WDIR
##          <num>    <int>    <int>    <int>    <int>    <int>

```

```

##   1:    99    2008     1     1     0     0    274
##   2:    99    2008     1     1     1     0    282
##   3:    99    2008     1     1     2     0    284
##   4:    99    2008     1     1     3     0    282
##   5:    99    2008     1     1     4     0    268
##   ---
## 52525:    99    2008     1     3     6     0    327
## 52526:    99    2008     1     3     7     0    323
## 52527:    99    2008     1     3     8     0    321
## 52528:    99    2008     1     3     9     0    329
## 52529:    99    2008     1     3    10     0    325
##          X2008.WSPD X2008.GST X2008.WVHT X2008.DPD X2008.APD X2008.MWD X2008.PRES
##          <num>      <num>      <num>      <num>      <num>      <int>      <num>
##   1:    11.6     14.1     1.40     4.17     4.17     NA    1015.3
##   2:    10.6     12.9     1.23     4.17     4.02     NA    1016.4
##   3:     9.5     11.5     1.05     4.00     3.99     NA    1017.8
##   4:     7.3      8.7     0.85     3.45     3.79     NA    1018.9
##   5:     4.9      6.0     0.64     7.69     4.09     NA    1019.5
##   ---
## 52525:    10.3     12.5     1.96     6.67     5.03     NA    1022.3
## 52526:    10.7     13.4     1.91     6.67     4.72     NA    1022.9
## 52527:    11.1     14.5     1.94     6.67     4.71     NA    1023.9
## 52528:    11.9     15.0     2.14     7.69     4.80     NA    1024.2
## 52529:    11.4     14.4     2.10     4.76     4.77     NA    1025.5
##          X2008.ATMP X2008.WTMP X2008.DEWP X2008.VIS X2008.TIDE X2009..YY X2009.MM
##          <num>      <num>      <num>      <num>      <num>      <int>      <int>
##   1:     4.0      4.7     -1.6      99       99    2008       12
##   2:     3.6      4.7     -1.7      99       99    2009        1
##   3:     3.3      4.8     -1.6      99       99    2009        1
##   4:     3.2      4.8     -1.7      99       99    2009        1
##   5:     2.8      4.8     -1.4      99       99    2009        1
##   ---
## 52525:   -10.1      4.4    -13.3      99       99    2009        1
## 52526:   -10.4      4.7    -13.4      99       99    2009        1
## 52527:   -10.7      4.4    -13.5      99       99    2009        1
## 52528:   -11.2      4.4    -13.7      99       99    2009        1
## 52529:   -11.6      4.4    -14.2      99       99    2009        1
##          X2009.DD X2009.hh X2009.mm X2009.WDIR X2009.WSPD X2009.GST X2009.WVHT
##          <int>      <int>      <int>      <int>      <num>      <num>      <num>
##   1:     31       23       50      326     14.4     17.3     2.52
##   2:      1        0       50      316     16.7     19.7     2.65
##   3:      1        1       50      307     15.7     19.0     3.01
##   4:      1        2       50      315     17.0     20.7     2.65
##   5:      1        3       50      315     16.5     20.8     3.05
##   ---
## 52525:      6       12       50      293      8.6     10.3     0.71
## 52526:      6       13       50      299      7.8     10.0     0.69
## 52527:      6       14       50      306      7.5      9.0     0.68
## 52528:      6       15       50      307      6.3      7.5     0.57
## 52529:      6       16       50      283      5.5      6.7     0.49
##          X2009.DPD X2009.APD X2009.MWD X2009.PRES X2009.ATMP X2009.WTMP
##          <num>      <num>      <int>      <num>      <num>      <num>
##   1:    7.14     5.27      NA    1002.4     -5.3      5.6
##   2:    7.14     5.05      NA    1003.2     -7.7      5.6

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##   3:    6.25    5.27     NA  1003.9    -8.7    5.6
##   4:    5.88    5.19     NA  1004.8   -10.1    5.5
##   5:    5.56    5.34     NA  1005.5   -10.6    5.5
##   ---
## 52525:    3.70    3.33     NA  1016.5   -1.4    4.8
## 52526:    3.33    3.23     NA  1017.3   -1.4    4.8
## 52527:    3.13    3.12     NA  1017.4   -1.3    4.8
## 52528:    3.13    3.12     NA  1017.4   -0.9    4.8
## 52529:    3.13    3.07     NA  1016.7   -0.8    4.8
##          X2009.DEWP X2009.VIS X2009.TIDE X2010..YY X2010.MM X2010.DD X2010.hh
##          <num>    <num>    <num>    <int>    <int>    <int>    <int>
##   1:    -6.8      99      99  2009      12      31      23
##   2:    -9.6      99      99  2010       1       1       0
##   3:   -12.0      99      99  2010       1       1       1
##   4:   -13.2      99      99  2010       1       1       2
##   5:   -13.2      99      99  2010       1       1       3
##   ---
## 52525:    -6.9      99      99  2010       9      23      12
## 52526:    -7.6      99      99  2010       9      23      13
## 52527:    -7.6      99      99  2010       9      23      14
## 52528:    -8.6      99      99  2010       9      23      15
## 52529:    -8.4      99      99  2010       9      23      16
##          X2010.mm X2010.WDIR X2010.WSPD X2010.GST X2010.WVHT X2010.DPD X2010.APD
##          <int>    <int>    <num>    <num>    <num>    <num>    <num>
##   1:      50      37      1.2      2.0      0.35    12.12    5.43
##   2:      50      32      2.5      3.5      0.35    12.12    5.02
##   3:      50       2      4.1      5.1      0.38    12.90    5.19
##   4:      50       4      4.3      5.5      0.38    12.12    4.94
##   5:      50     355      5.4      6.5      0.41    13.79    3.62
##   ---
## 52525:      50     348      1.9      2.5      0.30    11.43    4.52
## 52526:      50     334      2.2      2.7      0.33    12.12    4.93
## 52527:      50     344      2.1      2.7      0.28    12.12    4.46
## 52528:      50     342      0.7      0.9      0.28    12.12    4.55
## 52529:      50      77      0.6      1.0      0.30    12.12    5.20
##          X2010.MWD X2010.PRES X2010.ATMP X2010.WTMP X2010.DEWP X2010.VIS
##          <int>    <num>    <num>    <num>    <num>    <num>
##   1:     NA  1020.0      1.0      5.9     -0.2      99
##   2:     NA  1019.4      1.5      6.0     -0.6      99
##   3:     NA  1018.4      1.4      6.0     -0.7      99
##   4:     NA  1017.8      1.1      6.0     -0.8      99
##   5:     NA  1016.8      0.8      6.1     -0.6      99
##   ---
## 52525:     NA  1022.6     16.8     16.3     14.3      99
## 52526:     NA  1023.3     16.7     16.4     14.1      99
## 52527:     NA  1023.7     16.7     16.5     13.6      99
## 52528:     NA  1023.4     17.5     16.9     14.0      99
## 52529:     NA  1023.4     17.7     17.5     12.6      99
##          X2010.TIDE X2011..YY X2011.MM X2011.DD X2011.hh X2011.mm X2011.WDIR
##          <num>    <int>    <int>    <int>    <int>    <int>    <int>
##   1:     99    2010      12      31      23      50     225
##   2:     99    2011       1       1       0      50     234
##   3:     99    2011       1       1       1      50     234
##   4:     99    2011       1       1       2      50     233

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##   5:      99    2011     1     1     3     50    227
##   ---
## 52525:      99    2011     1     2     23     50    257
## 52526:      99    2011     1     3      0     50    263
## 52527:      99    2011     1     3      1     50    275
## 52528:      99    2011     1     3      2     50    291
## 52529:      99    2011     1     3      3     50    304
##          X2011.WSPD X2011.GST X2011.WVHT X2011.DPD X2011.APD X2011.MWD X2011.PRES
##          <num>    <num>    <num>    <num>    <num>    <int>    <num>
## 1:       3.8      4.2     0.16   99.00    4.05     NA 1018.7
## 2:       4.9      5.7     0.19   99.00    2.74     NA 1018.5
## 3:       5.8      7.1     0.25   99.00    2.56     NA 1018.3
## 4:       5.7      6.8     0.39    2.47    2.58     NA 1018.0
## 5:       6.4      7.2     0.43    2.47    2.57     NA 1017.8
##   ---
## 52525:      3.6      4.3     0.19   99.00    4.19     NA 1009.3
## 52526:      5.6      6.2     0.19   99.00    4.39     NA 1009.4
## 52527:      5.8      6.6     0.19   99.00    4.16     NA 1008.7
## 52528:      9.3     11.6     0.40    2.47    2.57     NA 1009.0
## 52529:      9.3     11.3     0.72    3.23    2.94     NA 1007.7
##          X2011.ATMP X2011.WTMP X2011.DEWP X2011.VIS X2011.TIDE X2012..YY X2012.MM
##          <num>    <num>    <num>    <num>    <num>    <int>    <int>
## 1:       6.8      6.2     3.5     99      99    2012      6
## 2:       6.4      6.2     2.5     99      99    2012      7
## 3:       6.1      6.1     2.3     99      99    2012      7
## 4:       5.8      6.1     1.7     99      99    2012      7
## 5:       5.7      6.1     1.3     99      99    2012      7
##   ---
## 52525:      7.0      6.2     7.0     99      99    2012     12
## 52526:      6.9      6.1     6.9     99      99    2012     12
## 52527:      6.4      6.1     6.4     99      99    2012     12
## 52528:      5.6      6.0     4.2     99      99    2012     12
## 52529:      4.9      6.0     3.3     99      99    2012     12
##          X2012.DD X2012.hh X2012.mm X2012.WDIR X2012.WSPD X2012.GST X2012.WVHT
##          <int>    <int>    <int>    <int>    <num>    <num>    <num>
## 1:       30      23     50    253     3.4     4.2    0.52
## 2:        1       0     50    198     3.5     4.1    0.53
## 3:        1       1     50    199     4.0     4.7    0.48
## 4:        1       2     50    218     3.9     4.4    0.45
## 5:        1       3     50    222     4.5     4.8    0.41
##   ---
## 52525:      15      18     50     31     5.9     7.9    0.80
## 52526:      15      19     50     46     6.0     7.8    0.75
## 52527:      15      20     50     63     5.0     6.8    0.68
## 52528:      15      21     50     64     4.1     5.8    0.64
## 52529:      15      22     50     75     4.9     6.7    0.77
##          X2012.DPD X2012.APD X2012.MWD X2012.PRES X2012.ATMP X2012.WTMP
##          <num>    <num>    <int>    <num>    <num>    <num>
## 1:      9.09     5.33     86 1005.4    23.2    18.2
## 2:      7.69     5.41    107 1005.7    22.0    18.2
## 3:     10.00     5.60    102 1006.1    21.6    18.1
## 4:      9.09     5.20     87 1006.1    21.6    18.0
## 5:      7.69     4.68    100 1006.5    21.5    17.7
##   ---

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## 52525:    6.25    4.20    40    1025.3    3.0    8.6
## 52526:    5.88    4.17    40    1025.5    2.8    8.6
## 52527:    5.88    4.20    42    1026.1    2.6    8.4
## 52528:    5.56    4.27    39    1026.5    2.4    8.4
## 52529:    6.25    4.81    56    1026.8    2.5    8.3
##          X2012.DEWP X2012.VIS X2012.TIDE X2013..YY X2013.MM X2013.DD X2013.hh
##          <num>    <num>    <num>    <int>    <int>    <int>    <int>
## 1:      15.7      99      99    2012      12      31      23
## 2:      16.8      99      99    2013       1       1       0
## 3:      17.8      99      99    2013       1       1       1
## 4:      17.7      99      99    2013       1       1       2
## 5:      17.8      99      99    2013       1       1       3
## ---
## 52525:    -6.2      99      99    2013       5      17      12
## 52526:    -5.7      99      99    2013       5      17      13
## 52527:    -3.8      99      99    2013       5      17      14
## 52528:    -4.0      99      99    2013       5      17      15
## 52529:    -3.6      99      99    2013       5      17      16
##          X2013.mm X2013.WDIR X2013.WSPD X2013.GST X2013.WVHT X2013.DPD X2013.APD
##          <int>    <int>    <num>    <num>    <num>    <num>    <num>
## 1:      50      234      8.5    10.2     0.42     3.33     3.14
## 2:      50      246      9.0    10.9     0.52     2.86     2.94
## 3:      50      243      7.3     9.4     0.50     3.33     3.05
## 4:      50      252     10.5    12.4     0.50     3.03     2.99
## 5:      50      256     10.9    13.0     0.65     3.70     3.28
## ---
## 52525:     50      318      6.2     7.6     0.80    10.00     4.33
## 52526:     50      322      4.9     5.8     0.75    10.00     4.67
## 52527:     50      298      1.6     2.1     0.75    10.00     5.36
## 52528:     50      300      1.2     1.8     0.77    10.00     5.97
## 52529:     50      136      1.9     2.2     0.69    10.00     6.44
##          X2013.MWD X2013.PRES X2013.ATMP X2013.WTMP X2013.DEWP X2013.VIS
##          <int>    <num>    <num>    <num>    <num>    <num>
## 1:      279    1011.6      1.5      7.7     -3.7      99
## 2:      251    1010.8      1.5      7.7     -4.1      99
## 3:      237    1010.0      1.8      7.7     -4.0      99
## 4:      244    1009.0      2.4      7.7     -3.8      99
## 5:      265    1008.1      2.6      7.7     -3.8      99
## ---
## 52525:     85    1015.3     11.4     11.5      5.3      99
## 52526:     99    1015.7     11.8     11.6      5.9      99
## 52527:     82    1016.8     12.2     11.8      6.7      99
## 52528:     91    1017.1     12.9     12.2      6.0      99
## 52529:    100    1017.0     13.1     13.1      5.8      99
##          X2013.TIDE X2014..YY X2014.MM X2014.DD X2014.hh X2014.mm X2014.WDIR
##          <num>    <int>    <int>    <int>    <int>    <int>    <int>
## 1:      99      2013      12      31      23      50     255
## 2:      99      2014       1       1       0      50     246
## 3:      99      2014       1       1       1      50     246
## 4:      99      2014       1       1       2      50     275
## 5:      99      2014       1       1       3      50     277
## ---
## 52525:     99      2014       1       1       5      50     293
## 52526:     99      2014       1       1       6      50     281

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## 52527:      99    2014      1      1      7     50     281
## 52528:      99    2014      1      1      8     50     265
## 52529:      99    2014      1      1      9     50     266
##          X2014.WSPD X2014.GST X2014.WVHT X2014.DPD X2014.APD X2014.MWD X2014.PRES
##          <num>    <num>    <num>    <num>    <num>    <int>    <num>
## 1:       6.5      10.1     0.66     3.45     3.54    258   1019.2
## 2:       7.4      10.1     0.63     3.23     3.56    264   1019.2
## 3:       9.7      11.7     0.55     3.13     3.33    276   1019.8
## 4:      11.1      14.5     0.78     3.45     3.43    270   1019.6
## 5:      10.7      15.2     0.94     3.85     3.46    262   1020.2
## ---
## 52525:     11.2      14.2     1.01     3.85     3.54    266   1021.9
## 52526:     10.9      13.0     1.04     4.17     3.62    273   1022.8
## 52527:     10.1      12.3     0.81     3.85     3.44    280   1023.8
## 52528:     11.2      14.4     0.81     3.70     3.35    268   1024.0
## 52529:     12.4      15.3     0.95     3.85     3.49    271   1024.7
##          X2014.ATMP X2014.WTMP X2014.DEWP X2014.VIS X2014.TIDE X2015..YY X2015.MM
##          <num>    <num>    <num>    <num>    <num>    <int>    <int>
## 1:      -2.1      5.8     -9.6     99      99    2014      12
## 2:      -2.2      5.8     -8.4     99      99    2015       1
## 3:      -1.9      5.9     -7.3     99      99    2015       1
## 4:      -1.7      5.9     -8.3     99      99    2015       1
## 5:      -2.1      5.9     -9.4     99      99    2015       1
## ---
## 52525:     -3.0      5.9     -11.2     99      99    2015       1
## 52526:     -3.5      5.8     -11.9     99      99    2015       1
## 52527:     -3.5      5.8     -11.9     99      99    2015       1
## 52528:     -3.8      5.8     -12.3     99      99    2015       1
## 52529:     -4.0      5.8     -12.6     99      99    2015       1
##          X2015.DD X2015.hh X2015.mm X2015.WDIR X2015.WSPD X2015.GST X2015.WVHT
##          <int>    <int>    <int>    <int>    <num>    <num>    <num>
## 1:       31       23       50      287      4.9     8.3    0.44
## 2:        1        0       50      280      4.8     7.7    0.39
## 3:        1        1       50      275      4.1     5.4    0.35
## 4:        1        2       50      236      5.3     6.9    0.27
## 5:        1        3       50      220      4.8     6.9    0.20
## ---
## 52525:       2        5       50      237      9.6    11.3    0.76
## 52526:       2        6       50      245      9.2    11.0    0.78
## 52527:       2        7       50      246      8.8    10.3    0.66
## 52528:       2        8       50      241      8.7    10.6    0.64
## 52529:       2        9       50      251      9.8    11.9    0.62
##          X2015.DPD X2015.APD X2015.MWD X2015.PRES X2015.ATMP X2015.WTMP
##          <num>    <num>    <int>    <num>    <num>    <num>
## 1:      3.23     3.06     281    1022.9     -2.3     5.7
## 2:      3.03     2.91     283    1022.7     -2.3     5.7
## 3:      2.86     2.98     278    1022.2     -2.5     5.7
## 4:      2.86     2.82     277    1021.9     -2.3     5.6
## 5:     99.00     2.77      NA    1021.2     -2.7     5.6
## ---
## 52525:      3.57     3.22     241    1014.2      2.7     6.3
## 52526:      3.45     3.18     247    1014.2      3.2     6.3
## 52527:      3.33     3.12     253    1014.1      3.0     6.4
## 52528:      3.33     3.10     246    1014.6      3.0     6.4

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## 52529:      3.23      3.12      244     1014.7      3.0      6.3
##          X2015.DEWP X2015.VIS X2015.TIDE X2016..YY X2016.MM X2016.DD X2016.hh
##          <num>    <num>    <num>    <int>    <int>    <int>    <int>
## 1:        NA       99       99     2015      12      31      23
## 2:        NA       99       99     2016       1       1       0
## 3:        NA       99       99     2016       1       1       1
## 4:        NA       99       99     2016       1       1       2
## 5:        NA       99       99     2016       1       1       3
## ---
## 52525:      NA       99       99     2016       1      15      17
## 52526:      NA       99       99     2016       1      15      18
## 52527:      NA       99       99     2016       1      15      19
## 52528:      NA       99       99     2016       1      15      20
## 52529:      NA       99       99     2016       1      15      21
##          X2016.mm X2016.WDIR X2016.WSPD X2016.GST X2016.WVHT X2016.DPD X2016.APD
##          <int>    <int>    <num>    <num>    <num>    <num>    <num>
## 1:      50      280      8.8     10.6     1.06    10.00     4.83
## 2:      50      275      9.9     12.0     1.01    10.00     4.60
## 3:      50      266      8.9     10.4     1.09    10.00     4.49
## 4:      50      274      9.3     10.7     1.04    10.00     4.42
## 5:      50      279      9.8     11.5     1.08    9.09     4.56
## ---
## 52525:      50      125      3.9      5.4      0.22    99.00     5.21
## 52526:      50      125      4.2      5.3      0.27   12.12     4.81
## 52527:      50      119      5.1      6.3      0.31   13.79     4.01
## 52528:      50      128      5.1      6.7      0.37   12.90     3.31
## 52529:      50      125      5.5      6.5      0.41   12.12     3.23
##          X2016.MWD X2016.PRES X2016.ATMP X2016.WTMP X2016.DEWP X2016.VIS
##          <int>    <num>    <num>    <num>    <num>    <num>
## 1:      83    1015.1      6.4      8.6      0.3      99
## 2:      85    1015.2      6.3      8.5     -0.4      99
## 3:      83    1015.4      6.0      8.5      0.3      99
## 4:      81    1015.3      5.7      8.5     -0.3      99
## 5:      87    1015.3      5.5      8.4     -0.4      99
## ---
## 52525:      NA    1014.7      2.3      6.9     -4.0      99
## 52526:     134    1013.7      2.8      6.9     -3.3      99
## 52527:      72    1012.9      3.3      6.9     -2.1      99
## 52528:     113    1012.4      3.9      7.0     -1.2      99
## 52529:     342    1012.0      4.5      7.0      0.3      99
##          X2016.TIDE X2017..YY X2017.MM X2017.DD X2017.hh X2017.mm X2017.WDIR
##          <num>    <int>    <int>    <int>    <int>    <int>    <int>
## 1:      99    2016      12      31      23      50     177
## 2:      99    2017       1       1       0      50     177
## 3:      99    2017       1       1       1      50     174
## 4:      99    2017       1       1       2      50     186
## 5:      99    2017       1       1       3      50     207
## ---
## 52525:      99    2017       1      15      11      50     312
## 52526:      99    2017       1      15      12      50     305
## 52527:      99    2017       1      15      13      50     310
## 52528:      99    2017       1      15      14      50     311
## 52529:      99    2017       1      15      15      50     314
##          X2017.WSPD X2017.GST X2017.WVHT X2017.DPD X2017.APD X2017.MWD X2017.PRES

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```

##          <num>      <num>      <num>      <num>      <num>      <int>      <num>
## 1:       9.1       10.7      0.82     10.81      3.84      93   1014.5
## 2:       7.3       8.8       0.87     10.81      3.94      75   1013.7
## 3:       7.4       8.7       0.85      4.00      3.95     132   1012.7
## 4:       8.6      10.7       0.85      4.35      3.92     135   1011.8
## 5:       7.9      10.0       0.94     12.12      3.90     126   1010.8
## ---
## 52525:    8.5      10.7      0.56      3.23      3.33     297  1023.5
## 52526:    9.6      11.5      0.58      3.13      3.16     310  1024.1
## 52527:    9.5      11.4      0.62      3.33      3.29     311  1024.9
## 52528:   10.8      13.6      0.69      3.45      3.28     313  1025.2
## 52529:   10.2      11.9      0.74      3.33      3.33     319  1024.7
##          X2017.ATMP X2017.WTMP X2017.DEWP X2017.VIS X2017.TIDE X2018..YY X2018.MM
##          <num>      <num>      <num>      <num>      <num>      <int>      <int>
## 1:       5.3       8.1        NA       99       99   2017      12
## 2:       6.0       8.1        NA       99       99   2018       1
## 3:       7.0       8.2        NA       99       99   2018       1
## 4:       7.6       8.2        NA       99       99   2018       1
## 5:       7.2       8.2        NA       99       99   2018       1
## ---
## 52525:    0.2       7.0        NA       99       99   2018       1
## 52526:    0.3       7.0        NA       99       99   2018       1
## 52527:    0.0       7.0        NA       99       99   2018       1
## 52528:    0.1       7.0        NA       99       99   2018       1
## 52529:    0.1       7.0        NA       99       99   2018       1
##          X2018.DD X2018.hh X2018.mm X2018.WDIR X2018.WSPD X2018.GST X2018.WVHT
##          <int>      <int>      <int>      <int>      <num>      <num>      <num>
## 1:       31        23        50      302      13.3      16.7     1.19
## 2:        1         0        50      294      11.5      15.0     1.30
## 3:        1         1        50      295      12.0      15.3     1.25
## 4:        1         2        50      305      10.5      14.2     1.18
## 5:        1         3        50      314      11.8      14.2     1.14
## ---
## 52525:    24        11        50      228       7.5      9.3     0.77
## 52526:    24        12        50      241       8.3     10.4     0.77
## 52527:    24        13        50      270       8.6     10.6     0.84
## 52528:    24        14        50      261      10.4     12.5     0.98
## 52529:    24        15        50      266      11.7     13.8     1.12
##          X2018.DPD X2018.APD X2018.MWD X2018.PRES X2018.ATMP X2018.WTMP
##          <num>      <num>      <int>      <num>      <num>      <num>
## 1:      4.35      3.76      301    1020.6     -10.3      6.5
## 2:      4.76      3.97      301    1020.9     -10.3      6.5
## 3:      4.35      3.84      304    1020.8     -11.1      6.5
## 4:      4.17      3.74      312    1021.1     -11.8      6.5
## 5:      3.85      3.65      319    1021.1     -12.2      6.5
## ---
## 52525:    7.69      4.01      106    1004.8      4.8      4.5
## 52526:    7.69      3.74      92    1005.7      4.9      4.5
## 52527:   10.00      3.93     122    1007.0      4.6      4.5
## 52528:   10.00      3.98     127    1008.2      3.8      4.6
## 52529:   10.00      4.13     113    1008.5      3.2      4.6
##          X2018.DEWP X2018.VIS X2018.TIDE X2019..YY X2019.MM X2019.DD X2019.hh
##          <num>      <num>      <num>      <int>      <int>      <int>      <int>
## 1:       NA        99        99    2019       1       1       0

```

```

##   2:      NA    99    99  2019     1     1     1
##   3:      NA    99    99  2019     1     1     2
##   4:      NA    99    99  2019     1     1     3
##   5:      NA    99    99  2019     1     1     4
##   ---
## 52525:      NA    99    99  2019     2     5    22
## 52526:      NA    99    99  2019     2     5    23
## 52527:      NA    99    99  2019     2     6     0
## 52528:      NA    99    99  2019     2     6     1
## 52529:      NA    99    99  2019     2     6     2
##          X2019.mm X2019.WDIR X2019.WSPD X2019.GST X2019.WVHT X2019.DPD X2019.APD
##          <int>    <int>    <num>    <num>    <num>    <num>    <num>
##   1:      50     158     9.6    11.5    0.81    4.00    3.77
##   2:      50     136    10.6    12.3    0.99    4.35    3.95
##   3:      50     143    11.1    13.3    1.22    4.76    4.18
##   4:      50     139    12.3    14.6    1.31    5.00    4.15
##   5:      50     133    12.3    15.6    1.41    5.00    4.31
##   ---
## 52525:      50     260     4.3     4.9    0.27   10.81    4.90
## 52526:      50     281     6.2     7.4    0.28   10.00    5.25
## 52527:      50     293     8.8    10.0    0.33   10.00    3.47
## 52528:      50     281     6.3     7.0    0.48    2.86    3.17
## 52529:      50     294     6.2     7.7    0.48   10.81    3.45
##          X2019.MWD X2019.PRES X2019.ATMP X2019.WTMP X2019.DEWP X2019.VIS
##          <int>    <num>    <num>    <num>    <num>    <num>
##   1:     135   1023.7     3.6     7.0     1.5     99
##   2:     131   1021.0     4.1     7.0     1.7     99
##   3:     130   1019.3     4.1     7.0     2.6     99
##   4:     131   1017.3     4.2     7.0     3.3     99
##   5:     134   1014.8     5.0     7.0     4.4     99
##   ---
## 52525:      50   1012.1     8.7     4.3     4.0     99
## 52526:     256   1013.2     8.1     4.3     3.5     99
## 52527:      72   1013.9     8.9     4.2     2.8     99
## 52528:     293   1014.9     7.2     4.2     2.6     99
## 52529:     167   1016.0     6.7     4.3     2.5     99
##          X2019.TIDE X2020..YY X2020.MM X2020.DD X2020.hh X2020.mm X2020.WDIR
##          <num>    <int>    <int>    <int>    <int>    <int>    <int>
##   1:     99    2019     12     31     23     50    295
##   2:     99    2020      1      1      0     50    276
##   3:     99    2020      1      1      1     50    257
##   4:     99    2020      1      1      2     50    247
##   5:     99    2020      1      1      3     50    242
##   ---
## 52525:     99    2020      6     26      1     50    193
## 52526:     99    2020      6     26      2     50    188
## 52527:     99    2020      6     26      3     50    202
## 52528:     99    2020      6     26      4     50    186
## 52529:     99    2020      6     26      5     50    194
##          X2020.WSPD X2020.GST X2020.WVHT X2020.DPD X2020.APD X2020.MWD X2020.PRES
##          <num>    <num>    <num>    <num>    <num>    <int>    <num>
##   1:     5.4     7.0    2.48   10.00    7.51     94  1000.3
##   2:     5.3     6.9    2.46   10.00    7.61    103  1000.4
##   3:     7.1     9.3    2.09   10.00    7.03     91  1000.5

```

```

##    4:      7.7     10.0     2.17    10.81     6.89      77   999.9
##    5:      7.8     10.0     2.32    10.00     7.45      80   999.6
##    ---
## 52525:      4.5      4.9     0.44     7.69     5.48      87  1013.0
## 52526:      4.4      4.8     0.47     6.25     5.08      96  1013.2
## 52527:      2.8      3.4     0.48     7.69     5.00     105  1013.0
## 52528:      2.9      3.4     0.50     6.25     5.26     101  1012.9
## 52529:      1.8      2.6     0.50     6.67     5.27      99  1012.8
##          X2020.ATMP X2020.WTMP X2020.DEWP X2020.VIS X2020.TIDE X2021..YY X2021.MM
##          <num>     <num>     <num>     <num>     <num>     <int>     <int>
##    1:      3.0      6.9      2.7      99       99    2021      1
##    2:      3.4      6.9      2.6      99       99    2021      1
##    3:      3.6      6.9      2.7      99       99    2021      1
##    4:      3.9      6.8      2.9      99       99    2021      1
##    5:      4.3      6.8      2.9      99       99    2021      1
##    ---
## 52525:     21.6     19.6     15.9      99       99    2021      1
## 52526:     20.9     19.4     16.1      99       99    2021      1
## 52527:     20.5     19.4     16.1      99       99    2021      1
## 52528:     19.8     19.1     16.5      99       99    2021      1
## 52529:     20.0     19.1     16.2      99       99    2021      1
##          X2021.DD X2021.hh X2021.mm X2021.WDIR X2021.WSPD X2021.GST X2021.WVHT
##          <int>     <int>     <int>     <int>     <num>     <num>     <num>
##    1:       1        0        0     302       7.9      9.8   99.00
##    2:       1        0       10     301       7.8     10.1   99.00
##    3:       1        0       20     301       8.1     10.1   99.00
##    4:       1        0       30     305       7.3      9.0   99.00
##    5:       1        0       40     302       7.2      9.4     0.57
##    ---
## 52525:       7       16       10     309       7.3      9.1   99.00
## 52526:       7       16       20     309       7.2      9.1   99.00
## 52527:       7       16       30     306       7.1      8.8   99.00
## 52528:       7       16       40     307       7.0      9.0     1.96
## 52529:       7       16       50     308       7.3      9.0   99.00
##          X2021.DPD X2021.APD X2021.MWD X2021.PRES X2021.ATMP X2021.WTMP
##          <num>     <num>     <int>     <num>     <num>     <num>
##    1:  99.00   99.00      NA  1024.1      5.2      7.4
##    2:  99.00   99.00      NA  1024.2      5.1      7.4
##    3:  99.00   99.00      NA  1024.4      5.1      7.4
##    4:  99.00   99.00      NA  1024.6      5.1      7.3
##    5:   3.45    3.22     294  1024.7      5.0      7.3
##    ---
## 52525:  99.00   99.00      NA  1015.6      2.4      6.8
## 52526:  99.00   99.00      NA  1015.4      2.6      6.8
## 52527:  99.00   99.00      NA  1015.3      2.6      6.8
## 52528:  10.00    6.31     86  1015.2      2.8      6.8
## 52529:  99.00   99.00      NA  1015.1      3.0      6.8
##          X2021.DEWP X2021.VIS X2021.TIDE X2022..YY X2022.MM X2022.DD X2022.hh
##          <num>     <num>     <num>     <int>     <int>     <int>     <int>
##    1:   -3.0      99      99    2022       1       1       0
##    2:   -3.0      99      99    2022       1       1       0
##    3:   -2.8      99      99    2022       1       1       0
##    4:   -2.8      99      99    2022       1       1       0
##    5:   -2.9      99      99    2022       1       1       0

```

```

## ---
## 52525: -3.9 99 99 2022 12 31 23
## 52526: -3.8 99 99 2022 12 31 23
## 52527: -4.1 99 99 2022 12 31 23
## 52528: -4.3 99 99 2022 12 31 23
## 52529: -4.0 99 99 2022 12 31 23
## X2022.mm X2022.WDIR X2022.WSPD X2022.GST X2022.WVHT X2022.DPD X2022.APD
## <int> <int> <num> <num> <num> <num> <num>
## 1: 0 239 2.5 3.2 99.00 99.00 99.00
## 2: 10 235 1.9 2.8 99.00 99.00 99.00
## 3: 20 207 1.6 2.4 99.00 99.00 99.00
## 4: 30 183 1.3 1.7 99.00 99.00 99.00
## 5: 40 176 1.5 2.1 0.40 9.09 6.19
## ---
## 52525: 10 NA 4.1 4.9 99.00 99.00 99.00
## 52526: 20 NA 3.9 4.5 99.00 99.00 99.00
## 52527: 30 NA 4.1 4.5 99.00 99.00 99.00
## 52528: 40 NA 4.1 4.5 0.43 10.00 3.36
## 52529: 50 NA 4.0 5.1 0.41 10.00 3.33
## X2022.MWD X2022.PRES X2022.ATMP X2022.WTMP X2022.DEWP X2022.VIS
## <int> <num> <num> <num> <num> <num>
## 1: NA 1015.7 NA 8.5 NA 99
## 2: NA 1015.7 NA 8.5 NA 99
## 3: NA 1015.7 NA 8.5 NA 99
## 4: NA 1015.5 NA 8.5 NA 99
## 5: 137 1015.5 NA 8.5 NA 99
## ---
## 52525: NA 1011.5 NA 7.6 NA 99
## 52526: NA 1011.4 NA 7.6 NA 99
## 52527: NA 1011.1 NA 7.6 NA 99
## 52528: 71 1011.1 NA 7.6 NA 99
## 52529: 68 1011.0 NA 7.6 NA 99
## X2022.TIDE X2023..YY X2023.MM X2023.DD X2023.hh X2023.mm X2023.WDIR
## <num> <int> <int> <int> <int> <int> <int>
## 1: 99 2023 1 1 0 0 NA
## 2: 99 2023 1 1 0 10 NA
## 3: 99 2023 1 1 0 20 NA
## 4: 99 2023 1 1 0 30 NA
## 5: 99 2023 1 1 0 40 NA
## ---
## 52525: 99 2023 1 1 7 20 NA
## 52526: 99 2023 1 1 7 30 NA
## 52527: 99 2023 1 1 7 40 NA
## 52528: 99 2023 1 1 7 50 NA
## 52529: 99 2023 1 1 8 0 NA
## X2023.WSPD X2023.GST X2023.WVHT X2023.DPD X2023.APD X2023.MWD X2023.PRES
## <num> <num> <num> <num> <num> <int> <num>
## 1: 4.3 5.0 99.00 99.00 99.00 NA 1010.8
## 2: 4.5 5.4 99.00 99.00 99.00 NA 1010.6
## 3: 4.2 4.8 99.00 99.00 99.00 NA 1010.2
## 4: 4.2 4.8 99.00 99.00 99.00 NA 1010.0
## 5: 3.9 4.3 0.41 9.09 3.43 112 1009.8
## ---
## 52525: 2.4 2.9 99.00 99.00 99.00 NA 1003.7

```

```

## 52526:      2.0      2.7    99.00    99.00    99.00     NA 1003.3
## 52527:      0.9      1.2     0.36    10.00     4.38     95 1002.9
## 52528:      1.0      1.3     0.37    10.81     4.46     90 1002.4
## 52529:      1.7      2.7    99.00    99.00    99.00     NA 1003.2
##          X2023.ATMP X2023.WTMP X2023.DEWP X2023.VIS X2023.TIDE
##          <num>     <num>     <num>     <num>     <num>
## 1:        NA       7.6      NA       99       99
## 2:        NA       7.6      NA       99       99
## 3:        NA      NA      NA       99       99
## 4:        NA       7.6      NA       99       99
## 5:        NA       7.6      NA       99       99
## ---
## 52525:      NA       7.7      NA       99       99
## 52526:      NA       7.7      NA       99       99
## 52527:      NA       7.7      NA       99       99
## 52528:      NA       7.6      NA       99       99
## 52529:      NA       7.6      NA       99       99

```

#No, situations that not appropriate:

#Context Matters: The meaning of the value you are replacing is crucial.

#Data Integrity: Automatically converting certain values to NA might distort the dataset and lead to incorrect analyses. Always consider the implications on data integrity and the analysis that follows.

#Data Type Considerations: If working with categorical data, converting certain values to NA could remove important distinctions.

```

#c
library("ggplot2")
regression<-lm(X1985.WD~ X1985.ATMP, data = data)
Plot<-ggplot(data, aes(x = X1985.ATMP, y =X1985.WD )) +
  geom_point(alpha = 0.5) +
  geom_smooth(method = "lm", color = "blue") +
  labs(title = "Wind Over Temperature Trend",
       x = "AIR TEMPRATURE",
       y = "WIND") +
  theme_minimal()
Plot

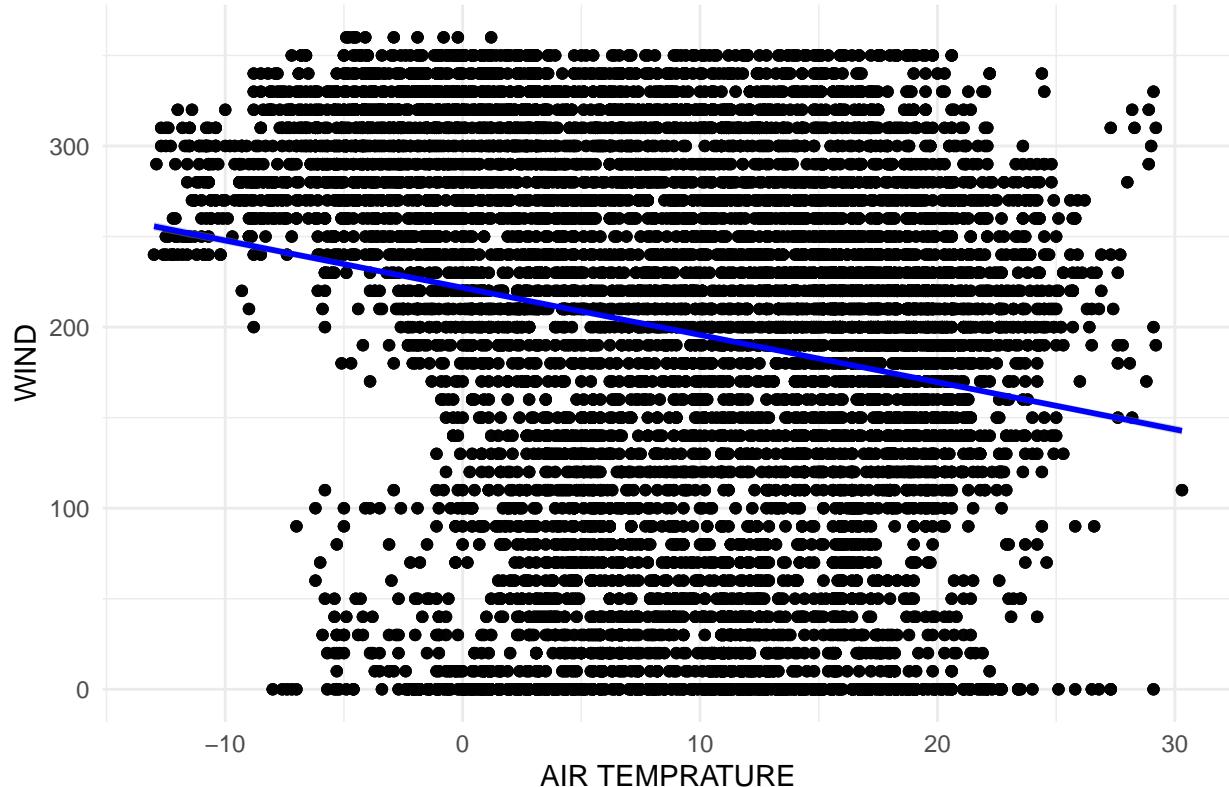
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 42 rows containing non-finite outside the scale range
## ('stat_smooth()').

## Warning: Removed 42 rows containing missing values or values outside the scale range
## ('geom_point()').

```

Wind Over Temperature Trend



```
#d
library("rstanarm")

## Loading required package: Rcpp

## This is rstanarm version 2.32.1

## - See https://mc-stan.org/rstanarm/articles/priors for changes to default priors!

## - Default priors may change, so it's safest to specify priors, even if equivalent to the defaults.

## - For execution on a local, multicore CPU with excess RAM we recommend calling

##   options(mc.cores = parallel::detectCores())

regression<-stan_glm(X1985.ATMP~X1985.hh, data = data)

## 
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 1).
## Chain 1:
## Chain 1: Gradient evaluation took 4.7e-05 seconds
## Chain 1: 1000 transitions using 10 leapfrog steps per transition would take 0.47 seconds.
## Chain 1: Adjust your expectations accordingly!
```

```

## Chain 1:
## Chain 1:
## Chain 1: Iteration: 1 / 2000 [ 0%] (Warmup)
## Chain 1: Iteration: 200 / 2000 [ 10%] (Warmup)
## Chain 1: Iteration: 400 / 2000 [ 20%] (Warmup)
## Chain 1: Iteration: 600 / 2000 [ 30%] (Warmup)
## Chain 1: Iteration: 800 / 2000 [ 40%] (Warmup)
## Chain 1: Iteration: 1000 / 2000 [ 50%] (Warmup)
## Chain 1: Iteration: 1001 / 2000 [ 50%] (Sampling)
## Chain 1: Iteration: 1200 / 2000 [ 60%] (Sampling)
## Chain 1: Iteration: 1400 / 2000 [ 70%] (Sampling)
## Chain 1: Iteration: 1600 / 2000 [ 80%] (Sampling)
## Chain 1: Iteration: 1800 / 2000 [ 90%] (Sampling)
## Chain 1: Iteration: 2000 / 2000 [100%] (Sampling)
## Chain 1:
## Chain 1: Elapsed Time: 0.044 seconds (Warm-up)
## Chain 1: 2.473 seconds (Sampling)
## Chain 1: 2.517 seconds (Total)
## Chain 1:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 2).
## Chain 2:
## Chain 2: Gradient evaluation took 1.7e-05 seconds
## Chain 2: 1000 transitions using 10 leapfrog steps per transition would take 0.17 seconds.
## Chain 2: Adjust your expectations accordingly!
## Chain 2:
## Chain 2:
## Chain 2: Iteration: 1 / 2000 [ 0%] (Warmup)
## Chain 2: Iteration: 200 / 2000 [ 10%] (Warmup)
## Chain 2: Iteration: 400 / 2000 [ 20%] (Warmup)
## Chain 2: Iteration: 600 / 2000 [ 30%] (Warmup)
## Chain 2: Iteration: 800 / 2000 [ 40%] (Warmup)
## Chain 2: Iteration: 1000 / 2000 [ 50%] (Warmup)
## Chain 2: Iteration: 1001 / 2000 [ 50%] (Sampling)
## Chain 2: Iteration: 1200 / 2000 [ 60%] (Sampling)
## Chain 2: Iteration: 1400 / 2000 [ 70%] (Sampling)
## Chain 2: Iteration: 1600 / 2000 [ 80%] (Sampling)
## Chain 2: Iteration: 1800 / 2000 [ 90%] (Sampling)
## Chain 2: Iteration: 2000 / 2000 [100%] (Sampling)
## Chain 2:
## Chain 2: Elapsed Time: 0.036 seconds (Warm-up)
## Chain 2: 2.484 seconds (Sampling)
## Chain 2: 2.52 seconds (Total)
## Chain 2:
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 3).
## Chain 3:
## Chain 3: Gradient evaluation took 1.3e-05 seconds
## Chain 3: 1000 transitions using 10 leapfrog steps per transition would take 0.13 seconds.
## Chain 3: Adjust your expectations accordingly!
## Chain 3:
## Chain 3:
## Chain 3: Iteration: 1 / 2000 [ 0%] (Warmup)
## Chain 3: Iteration: 200 / 2000 [ 10%] (Warmup)

```

```

## Chain 3: Iteration: 400 / 2000 [ 20%] (Warmup)
## Chain 3: Iteration: 600 / 2000 [ 30%] (Warmup)
## Chain 3: Iteration: 800 / 2000 [ 40%] (Warmup)
## Chain 3: Iteration: 1000 / 2000 [ 50%] (Warmup)
## Chain 3: Iteration: 1001 / 2000 [ 50%] (Sampling)
## Chain 3: Iteration: 1200 / 2000 [ 60%] (Sampling)
## Chain 3: Iteration: 1400 / 2000 [ 70%] (Sampling)
## Chain 3: Iteration: 1600 / 2000 [ 80%] (Sampling)
## Chain 3: Iteration: 1800 / 2000 [ 90%] (Sampling)
## Chain 3: Iteration: 2000 / 2000 [100%] (Sampling)
## Chain 3:
## Chain 3: Elapsed Time: 0.044 seconds (Warm-up)
## Chain 3:                      2.482 seconds (Sampling)
## Chain 3:                      2.526 seconds (Total)
## Chain 3:
## 
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 4).
## Chain 4:
## Chain 4: Gradient evaluation took 1.2e-05 seconds
## Chain 4: 1000 transitions using 10 leapfrog steps per transition would take 0.12 seconds.
## Chain 4: Adjust your expectations accordingly!
## Chain 4:
## Chain 4:
## Chain 4: Iteration: 1 / 2000 [ 0%] (Warmup)
## Chain 4: Iteration: 200 / 2000 [ 10%] (Warmup)
## Chain 4: Iteration: 400 / 2000 [ 20%] (Warmup)
## Chain 4: Iteration: 600 / 2000 [ 30%] (Warmup)
## Chain 4: Iteration: 800 / 2000 [ 40%] (Warmup)
## Chain 4: Iteration: 1000 / 2000 [ 50%] (Warmup)
## Chain 4: Iteration: 1001 / 2000 [ 50%] (Sampling)
## Chain 4: Iteration: 1200 / 2000 [ 60%] (Sampling)
## Chain 4: Iteration: 1400 / 2000 [ 70%] (Sampling)
## Chain 4: Iteration: 1600 / 2000 [ 80%] (Sampling)
## Chain 4: Iteration: 1800 / 2000 [ 90%] (Sampling)
## Chain 4: Iteration: 2000 / 2000 [100%] (Sampling)
## Chain 4:
## Chain 4: Elapsed Time: 0.045 seconds (Warm-up)
## Chain 4:                      2.483 seconds (Sampling)
## Chain 4:                      2.528 seconds (Total)
## Chain 4:

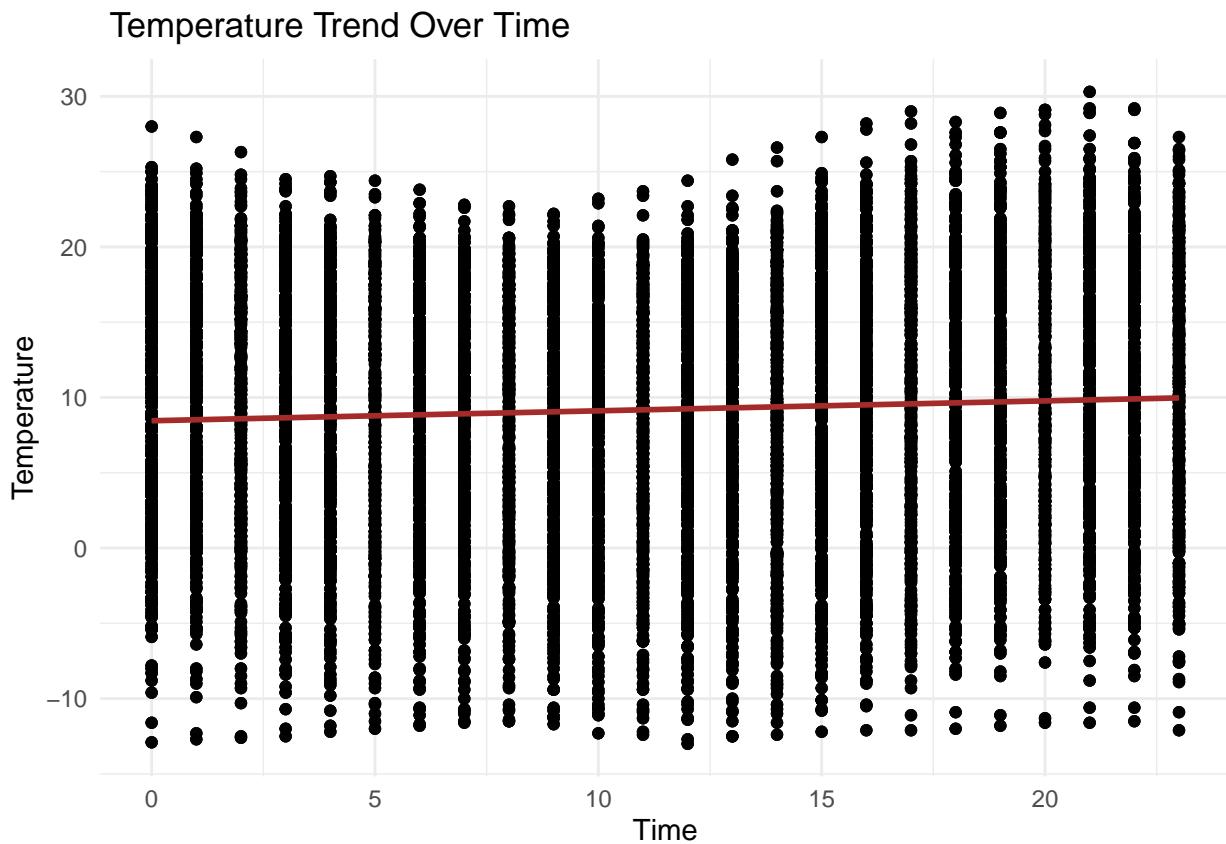
Plot<-ggplot(data, aes(x = X1985.hh, y =X1985.ATMP )) +
  geom_point(alpha = 0.5) +
  geom_smooth(method = "lm", color = "brown") +
  labs(title = " Temperature Trend Over Time",
       x = "Time",
       y = "Temperature") +
  theme_minimal()
Plot
```

```

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

## Warning: Removed 24 rows containing non-finite outside the scale range
## ('stat_smooth()').
```

```
## Warning: Removed 24 rows containing missing values or values outside the scale range
## ('geom_point()').
```



```
#Reaserch how temperature changes in a specific day in 1985
```